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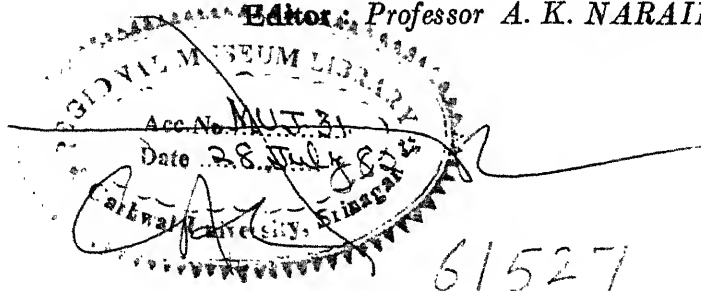
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Culture and Archaeology

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EXCAVATIONS AT SRAVASTI—1959

by

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## PREFACE

*The present monograph incorporates the results of the excavation at Sravasti in the year 1959 carried out by me for the Archaeological Survey of India which institution I was priveleged to be associated with, before coming over to the Banaras Hindu University a little over a year back. The report was nearly complete in 1961 but its final preparation was interrupted as I then had to go abroad for two years. The publication was further delayed because not long after my return from abroad, I took up the present assignment in this University.*

*Grateful acknowledgement is due to the present Director General of Archaeology in India for permitting me to excavate the site and more recently, for agreeing to the publication of the report by the Banaras Hindu University. During the excavation itself I was greatly helped by Shri D. P. Agrawala, formerly of the Archaeological Survey of India and now in the Tata Fundamental Research Institute, Bombay. The other members of the small excavation team were Sarvashri R. S. Kushwaha, Sushil Kumar, Promod Singh. The line drawings accompanying the report is the work of the talented Draughtsman Shri R. S. Kushwaha. My wife joined the small excavation team and readily agreed to take charge of pottery and antiquity section in the field under my general supervision.*

*I am obliged to my friend Dr. S. C. Ray of the Archaeological Survey of India for contributing the very valuable report on coins from excavations.*

*Here in the University, Dr. A. K. Narain, the Principal of the College of Indology gladly agreed to reccommend to the University authorities the publication of the report in the Monograph series of the Department. My thanks are due to him for this kind gesture.*

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## SUMMARY OF RESULTS

*The famous Buddhist site of Sravasti was subjected to a small-scale excavation in the early part of the year 1959. The immediate objective was to determine the antiquity and culture-sequence of the ancient site including the massive fortification.*

*For the first time, it was confirmed on archaeological grounds that the ancient township must have existed in the middle sixth century B.C.*

*The excavation yielded few unmistakable pieces of the Painted Grey Ware, but the ware has no independent horizon, as at Hastinapura. It occurs in conjunction with the Northern Black Polished ware which is prolific in numbers, compared to more westerly sites like Hastinapura and Rupar. Both the two distinctive wares form part of a fairly rich assemblage of diverse objects, belonging to the earliest habitation at the site with a date-bracket of (c. 600-300 B.C.).*

*Contrary to the general belief, the fortification seen all around the site, was not built till as late as middle 3rd Century B.C. or even later. It forms part of the second habitational period at the site. An interesting feature was that the mud rampart was topped over by brick fortification at regular intervals. Kautilya's Arthashastra contains a reference about the construction of brick-fortification at regular intervals.*

*There was only a sporadic habitation in the city area after 1st century A.D. as attested to by 1959 excavation. Fahien too has noted that the city was already in ruins when he visited it in the 5th cent. A.D.*

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## CHAPTER ONE

### INTRODUCTION

#### PLANNING AND SCOPE OF THE WORK

Sravasti is a small village about 100 miles north east of Lucknow. It is presently an important religious centre of the Buddhists, ranking next to Bodhgayā and Sārnāth. The ancient site lies in the heart-land of ancient Kosala which together with Magadha (S. E. Bihar) and Kasi (S. E. Uttar Pradesh) formed the focal region of northern India. In fact, it would be no exaggeration to say that the early history of India revolves round these three principalities. Kosala and Magadha figure prominently in ancient literary tradition. As against all this, archaeological investigations on a planned basis in the Ganga valley were lacking, the only exception being the fruitful excavation of Ahichchhatra (U.P.), in the early forties<sup>1</sup>. Archaeologists and scholars alike were reminded in 1947 by Sir Mortimer Wheeler about the inadequacy of the work in the Ganga valley and the need to do something about this<sup>2</sup>. The rich archaeological potentiality of the region had already been confirmed in no uncertain manner by the excavations at Ahichchhatra. Fortunately, the stalemate has been broken and since the year 1950, some of the important sites of the region were excavated, namely Hastinapura<sup>3</sup>, Kausambi<sup>4</sup>, Kumrahar<sup>5</sup>, Mathura<sup>6</sup>, Sonapur<sup>7</sup>, Kannauja<sup>8</sup>, Vaisali<sup>9</sup>, Rajghat<sup>10</sup>, Alamgirpur<sup>11</sup>. Although only a few of these were excavated on a large scale basis, our knowledge of the

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<sup>1</sup> A. Ghosh, & K. C. Panigrahi, "Pottery from Ahichchhatra (U.P.)", *Ancient India*, No. 1 (1946); see also V. S. Agrawala, "Terracotta Figurines of Ahichchhatra, Distt. Bareilly, *Ancient India*, No. 4 (1947-48), pp. 104-179.

<sup>2</sup> R. E. M. Wheeler, "Editorial Notes", *Ancient India*, No. 4 (1947-1948), p. 2.

<sup>3</sup> B. B. Lal, "Excavation at Hastinapura and other Explorations in the Upper Ganga and Sutlej Basins, 1950-1952", *Ancient India*, Nos. 10 & 11 (1954-1955), pp. 5-151.

<sup>4</sup> G. R. Sharma, in *Annual Bibliography of Indian Archaeology*, Kern Institute, Leiden; see also his *Excavations at Kausambi* (Allahabad, 1960).

<sup>5</sup> A. S. Altekar & V. Mishra, *Report on Kumrahar Excavations—1951-1955* (Patna, 1959).

<sup>6</sup> *Indian Archaeology 1954-1955—A Review* (New Delhi, 1955), pp. 15-16.

<sup>7</sup> *Indian Archaeology 1955-1956—A Review* (New Delhi, 1956), pp. 1920; see also *Indian Archaeology 1959-60—A Review* (New Delhi, 1960), p. 14.

<sup>8</sup> *Indian Archaeology 1958-1959—A Review* (New Delhi, 1959), p. 12 also see *Indian Archaeology 1959-1960—A Review* (New Delhi, 1960), pp. 14-16.

<sup>9</sup> *Indian Archaeology 1955-1956—A Review* (New Delhi, 1956), pp. 19-20.

<sup>10</sup> *Indian Archaeology 1957-1958—A Review* (New Delhi, 1958), pp. 50-51.

<sup>11</sup> *Indian Archaeology 1958-1959—A Review* (New Delhi, 1959), pp. 50-55.

early cultures of the Ganga valley has been substantially augmented. These efforts were given an impressive lead by the excavation of Hastinapura (U.P.) in the year 1950.

The problem at hand, then, as also partially now, was to trace the culture-complex of the missing millennium that separated the end of the Harappa Culture<sup>1</sup> and the beginning of the early historical period. This is not the place to go into a detailed analysis of the results of the excavation of Hastinapura. Perhaps the most significant contribution of the excavation lies in the fact that two very important links were known to the archaeologists. These were in the form of the two widely distributed and homogeneous pottery industries, viz. Painted Grey Ware and Northern Black Polished Ware<sup>2</sup>. At Hastinapura, the former was observed in strata lower than the earliest N.B.P. Ware yielding level. It may, however, be recalled that at Hastinapura the transition from the Painted Grey Ware to the N.B.P. Ware was not gradual, instead the Painted Grey Ware habitation at the site was observed to have been suddenly broken up by a flood in the Ganga, which is further said to have washed away a part of the ancient township. The N.B.P. Ware using people occupied the site after a lapse of nearly two hundred years. There was thus no overlap between the two cultures represented by the two distinct pottery industries of Hastinapura. What then was the story of the relationship of the two wares elsewhere during the intervening period<sup>3</sup>? What became of the Painted Grey Ware on its supposed movement in the central Gangetic region for it was observed to be nearly negligible at Kausambi<sup>4</sup>. These questions needed to be answered by further fieldwork. It was in this context that Sravasti, occupying a pivotal position in the central Gangetic region and with its antiquity widely proclaimed on literary grounds<sup>5</sup>, was thought of as a site which might furnish clues to the problems posed above. The potentiality of the site was further confirmed by the discovery of a mass concentration of Northern Black Polished Ware sherds on the northern fringes of the site<sup>6</sup>.

<sup>1</sup> Recent radio-carbon determinations would push the end of Harappa Culture back to a date earlier than 1500 B.C. See D. P. Agrawala in *Science*, Feb. 28, 1965, pp. 1-3.

<sup>2</sup> For the distribution of the two wares, see *Ancient India*, Nos. 10 & 11, pp. 138-146. The list, however, needs revision as more sites continue to be added.

<sup>3</sup> A. Ghosh, "Editorial Notes", *Indian Archaeology 1958-1959—A Review* (New Delhi, 1959), p. 2.

<sup>4</sup> Painted Grey Ware has also been recently reported from Sohgauna, near Gorakhpur (U.P.).

<sup>5</sup> B. C. Law, "Sravasti in Indian literature" (*Memoirs of the Archaeological Survey of India No. 50*).

<sup>6</sup> Information contained in an inspection note of Shri A. Ghosh, Director-General of Archaeology in India.

Previous work at the site, which is being considered immediately below, had left some of the problems of the site unsettled, particularly the nature and stratigraphy of the city wall. Fresh examination of the site on that account had also become necessary.

The limited excavation on the site, the results of which are being described in the following pages, was aimed at resolving the problems briefly enumerated above.

## PREVIOUS WORK

It was nearly hundred years ago that the site attracted the notice of Cunningham<sup>1</sup>. He visited Sravasti in the early part of 1863 and located the twin mounds of Sahet and Mahet which he identified as the Jetavana monastery and the ancient city of Sravasti respectively of the Buddhist literature. This identification was believed to have been confirmed by the discovery of a colossal Bodhisattva image which was inscribed in the early Kuṣāṇa characters. Cunningham resumed work in 1876 in the monastic area and was able to expose stūpas and smaller shrines of a comparatively late date<sup>2</sup>. He was followed by Hoey who dug areas both in Sahet and Mahet<sup>3</sup>. These excavations, though on a larger scale than those of Cunningham, were neither thorough nor complete. An important find of this excavation, however, was a well preserved stone-inscription dated in the year 1176 of Vikram era and mentioned the foundation of a *Vihāra* by an individual named *Madanapīla* of Kannauja<sup>4</sup>.

Of the earlier attempts on the site, Vogel's excavations in 1908 were the most extensive and the results obtained were of great value to the scholars.<sup>5</sup> As a partial background to the 1908 excavation, it may be recalled that Smith for the first time in 1898 doubted Cunningham's identification of Sahet and Mahet with ancient Jetavana and Sravasti, respectively<sup>6</sup>. Smith's argument was based on the data derived from the itineraries of Chinese pilgrims and his claims of having discovered the real site in Nepal territory. Subsequently, Smith also doubted the authenticity of the findspot of the colossal Bodhisattva image which formed the basis of Cunningham's identification<sup>7</sup>, as mentioned above.

<sup>1</sup> A. Cunningham, *Archaeological Survey of India Reports*, Vol. 1, pp. 330-48.

<sup>2</sup> A. Cunningham, *Archaeological Survey of India Reports*, Vol. XI, p. 78.

<sup>3</sup> *Journal of the Royal Asiatic Society of Bengal*, LI (1892), Pl. 1 (Extra number).

<sup>4</sup> *Journal and Proceeding of the Asiatic Society of Bengal*, 1925, XXI (MS), pp. 105 ff.

<sup>5</sup> J. Ph. Vogel, "Excavations at Sahet-Mahet," *Annual-Report of Archaeological Survey of India—1907-1908*, p. 81.

<sup>6</sup> V. A. Smith, "Kausambi and Sravasti", *Journal of the Royal Asiatic Society*, (1898).

<sup>7</sup> V. A. Smith, "Sravasti", *Journal of the Royal Asiatic Society* (1900).



Thus, at the time, when Vogel began work, the exact identification of Sravasti was still an open question. In this context, the discovery of a copper-plate grant (c. 12th cent. A.D.) of Govinda Chandra of Kannauja from the debris of one of the monasteries was considered very valuable, as it mentioned *Jetavana Vihara* and was on that account, believed by the excavators to have settled the identification of Sahet-Mahet with Sravasti<sup>1</sup>. The main achievement, however, of 1908 work lies in the fact that a clear account of the extent and configuration of the fortified city was available. Marshall and Sahni resumed work in 1910-11 and exposed a few more buildings in the Sahet area<sup>2</sup>.

As a result of the efforts described above, quite a substantial number of diverse objects were unearthed including sculptures, coins, seals and sealings and terracottas, but surprisingly enough none of the objects could be given a date earlier than the 1st century A.D., although the site admittedly had a much earlier beginning.

Without mitigating the value of these excavations, it may be said that they failed to throw any light on the earliest remains of the site nor could they definitely know about the constructional history of the massive fortifications around the ancient township. Thus, as stated in the preceding section, a fresh examination of the site was called for to settle these problems.

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<sup>1</sup> D. R. Sahni, "Sahet--Mahet plate of Govinda Chandra", *Epigraphia Indica*, Vol. XI, pp. 20-25.

<sup>2</sup> *Annual Report of Archaeological Survey of India*, 1910-11.

## CHAPTER TWO

### THE SITE AND ITS ENVIRONS

Sahet-Mahet or Sravasti (Long. 27°-31', Lat. 82°-2') lies at the boundry-line of Gonda and Bahraich districts of Uttar Pradesh<sup>1</sup>. The site is approachable by an all weather motorable road from Balrampur, a Railway station on the North Eastern Railway and State Transport buses ply regularly between Balrampur and Sravasti<sup>2</sup>.

The massive defences of the site rise high above the neighbouring pigmy villages and a visitor is thus, aware of the approaching ancient site much before he comes across the excavated remains of the monastic area, i.e. Sahet or ancient Jetavana. At this point of the journey, a diversion towards the right takes the visitor to the walled city, i.e. Mahet which is roughly at a distance of about 500 meters from Sahet.

The rampart walls are at places 60 ft. above the surrounding ground level and if one were to stand at one such spot when sky is free from haze, he can have a panoramic view of the natural surroundings. Towards north of the ancient township and at a rough distance of a mile flows Rapti<sup>3</sup>. The distance is sometimes reduced when the river is in floods but during the earlier period, the river was 'evidently flowing still closer as is indicated by the presence of Naukhan Jhil (Fig. 1) presumably a left over of the river. Further beyond the river in the distant background are the low hills of Nepal territory. On all other sides the site is surrounded by the *terai* tract consisting of sandy yellow loam deposited by the river silts. The area is subjected to heavy rainfall and is marshy and malarious. To-day rich cultivated fields dot the landscape but much of it during ancient times must have been covered by forests except for smaller pieces cleared for cultivation. There were, besides the city centre of Sravasti, many other smaller settlements as indicated by the ruins in the immediate neighbourhood, e. g. Pan-ahian Jhar, Ora Jhar, Kharatuam Jhar, Bhatti and a few others which remain

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<sup>1</sup> In fact the boundary-line passes in such a way that Sahet (the monastery area) falls within the administrative jurisdiction of Bahraich district while Mahet (the site of the city proper) lies in the Gonda District.

<sup>2</sup> For other information, see M. Venkatramayya, *Guide to Sravasti*, Delhi, 1959.

<sup>3</sup> Rapti was anciently known as *Achiravati*.

unsurveyed. The copper-plate grant of Govinda Chandra mentioned elsewhere in the report refers to a few localities in the neighbourhood of Jatavana, i.e. Sahet.<sup>1</sup>

As for the city site, i.e. Mahet, it may be stated that the rampart-walls, making a rough crescent on the plan are, very well marked throughout their circuit of approximately 5 kilometers, and unlike some of the other ancient fortified cities, viz. Kausambi, Ahichchhatra and Ujjain, inner face of the city wall at Sravasti is seldom completely obliterated by the accumulations of habitational deposits belonging to a later period. The top surface of the rampart is covered with enormous quantity of bricks and brick bats, evidently the remains of brick-walling above the mud-rampart which at places can be traced on plan. It may be recalled that Cunningham, when he visited Sravasti, observed a portion of what he termed as 'parapet-wall' still standing in the middle of the river face<sup>2</sup>.

As the main concentration of the ancient habitation appears to have been confined to the northern portion, nearer to the river front, it is in this area alone that higher ground levels inside the walled area are met with.

There are three easily identifiable land-marks on the site, viz. *Pakki kuti*, *Kachchi Kuti* and the Shobhanatha temple. The former two represent the highest points on the mound.

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<sup>1</sup> D. Sahni, *op. cit.*

<sup>2</sup> Cunningham, *op. cit.*, Vol. I, p. 331.

## CHAPTER THREE

### STRATIGRAPHY AND MATERIAL CULTURE

As already stated above, the excavation had a two-fold purpose, viz. (i) to determine the over all antiquity of the site along with the stratigraphical sequence of the deposits, and (ii) to examine the constructional details as well as the history of the massive fortifications. The two trenches, SRV-1 and SRV-2, were dug—the former up to natural soil, the latter much below the expected level of the natural soil which did not appear in the trench. In between themselves SRV-1 and SRV-2 revealed deposits of three different cultural periods in a stratigraphic sequence. As will be seen below, the three cultural periods widely differed from each other in their material equipment.

#### PERIOD—I

It may at once be stated that the township during this period did not have a city-wall which was constructed during the succeeding period. It is, thus, the pre-defence habitation that is being considered in the following lines.

Pottery is the chief industry of the period. The well known Northern Black Polished Ware recovered in prolific numbers is the dominant factor and in frequency heads the list of other varieties grouped under 'Black Ware' wherein a large majority of pots, fired in closed or partially closed kiln, show colour variations ranging from black and grey to brown. Further the 'red clay' was widely used, wherein the iron contents, when burnt would produce different colours under varying temperature. As the potters could not always control the temperature, nor could they be expected to know the actual amount of iron contents, some of the colour variations in this group can be regarded as accidental. The problem has been dealt with in some detail elsewhere in the present publication. The surface-treatment was generally of a very high order. Next in frequency after Northern Black Polished Ware is a 'Polished Black Ware' which does not have the lustre of the former, but otherwise there is not much difference. Normally, the occurrence of the two together would have been explained merely as a case of the existence of two grades of finish side by side, an expected feature when production is on a mass scale. The 'Black Polished Ware' of Sravasti is not different from a similar ware recovered from Hastinapura II in

association with the Painted Grey Ware<sup>1</sup>, but at the latter site, the Black Polished Ware precedes the earliest occurrence of the Northern Black Polished Ware. Thus, while there is no overlap between the Northern Black Polished Ware and the earlier occurring Black Polished Ware at Hastinapura, an overlap is definitely indicated at Sravasti. Black Polished Ware in conjunction with Northern Black Polished Ware is reported from Rajgir as well<sup>2</sup>. The use of painted pottery was not much in vogue and not more than two dozen painted pot sherds were recovered. These fall under at least three different categories: (i) Painted Grey Ware (Black-on-Grey), (ii) buff-on-black, and (iii) design-in-black set off against surrounding red.

The last named is of considerable significance. It has not so far been reported from any site in India and the highly complicated manner of its execution closely recalls the process noticed in the painting of Athenian vases datable to c. 6th cent. B.C. It would be interesting to work out the distribution of this ware on the sites in Indo-Pakistan sub-continent. At Sravasti, the ware does not seem to have been imported but the technique might have been learnt by contacts.

Plain red pottery is characterized by the presence of a great variety of shapes, many of which do not appear to have had any utilitarian purpose. In this category are a large number of miniature vessels which were mostly recovered intact, often from pits. The pots were generally well made and evenly fired in an open kiln. There are many shapes in plain 'Red Ware' which are common to Sravasti I, Hastinapura II<sup>3</sup> and Rajgir II<sup>4</sup>. The wide range of pottery recovered, both under 'Black' as well as under 'Red Wares', indicates a conscious effort towards sophistication though painted or other decorations were not in popular use. It is worth noting that this tendency towards sophistication in pottery is missing in the succeeding period.

Beads of glass and semi-precious stones were quite popular. Special note may be taken of 'eye-beads' of stratified glass which shows manufacturing skill of a very high order. Similar beads were earlier reported from Taxila<sup>3</sup>, but perhaps from no other site in India. There is a reason to believe that these beads were imported from elsewhere. Similarly a cylinder bead of lapis lazuli

<sup>1</sup> Lal, op. cit. p. 44.

<sup>2</sup> *Ibid.*

<sup>3</sup> A. Ghosh, "Rajgir 1948", *Ancient India*, No. 7.

<sup>4</sup> H. C. Beck, "Beads from Taxila", *Memoirs of Archaeological Survey of India*, No. 65.

is of interest as the stone is not locally available and thus indicates the possibility that the raw material had been imported. Among other interesting shapes mention may be made of leech-shaped beads of agate, axe-amulet of carnelian and eye-beads of agate. There appears to be a predilection for beads of complex character and some of these might have been used to protect the user from evil. It was not possible to ascertain from the limited area under excavation whether there was a bead-making centre at the site during this period.

|| The very few terracotta animal figures recovered mostly bear incised grooves. ; A very large number of terracotta discs were unearthed from the various levels of Period I. Some of these bear incised designs of sun-symbol and *svastika*, the former being more frequent. Plain discs were recovered from the levels of Hastinapura II and were regarded as gaming counters but in view of the complex symbols appearing on the discs from Sravasti, it is difficult to maintain that they were mere playthings. Alternatively, could these have a semi-religious purpose, for we know from literary sources that sun-worship was popular. The use of decorative tiles of terracotta was common. Occurrence of an extremely limited number of ivory arrowheads indicates that the type was not popular.

The use of translucent glass bangles of sea-blue and light green colour was very much in vogue. Bangles have been recovered in such large numbers as to indicate their immense popularity and also as an important item of trade. Copper appears to be the chief metal although use of iron was known. The former was employed for making objects for decorative and household purposes which include bangles, ear-rings, pins and borers. Some of these copper ornaments, e.g. a bangle with an interlaced knot and an ear-ring indicate not only a well developed skill in smithy but also the degree of sophistication and refinement among the people that required the production of the above noted objects. No coins were recovered nor remains of any structure could be located, but their absence could be due to the limited area under excavation. There was, however, ample evidence for both of them in the succeeding period.

## PERIOD—II

Perhaps there was no appreciable time gap between the beginning of Period II and the end of Period I. There was, however, a major change in the details of the material equipment of the two periods. This difference could be explained by the fact that a change in the needs of the people might have been brought about by a central authority. Contacts with the foreigner and large-scale use of metal may have added in no small measure to the progress.

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Pottery in this period is simple, almost exclusively utilitarian and decoration is very nearly negligible. The red ware, particularly, bears the stamp of mass production consisting mainly of three shapes, viz. (i) Miniature bowls, (ii) Pear-shaped vases and (iii) Jars with neck, the body of few covered with simple reed pattern impression. All this indicates a substantial departure from the tradition of making earthen wares noticed in the preceding period. Occurring side by side with the plain red ware is a thick, generally coarse, grey ware. The dishes in this ware often, bear impressed design of *Chakra* and concentric circles. This feature has been reported from many other north Indian sites<sup>1</sup>. Clay modelling was a popular craft during the period and human figures, hand-modelled as well as moulded specimens, were recovered from the excavations. The latter category is available from middle and upper levels only. Among the moulded figures mention may be made of *mithunas*. Similar figures were recovered from Ahichchhatra<sup>2</sup>. In the animal figures elephant was the most popular, often decorated with symbols, viz. *Chakra*, leaf, etc. Considering the frequency, the stratigraphic position and common occurrence on many north Indian sites, one may guess that these elephant figures may be of religious significance.

Beads during this period were locally manufactured as was evidenced by the presence of lumps of raw stones and unfinished specimens. Spiral beads of glass, and beads made of amethyst and crystal appeared to be popular in the period. An exquisite double pentagon bead of crystal shows a high degree of skill. Similar beads have been reported from many sites including Taxila<sup>3</sup> and Period III of Hastinapura.<sup>4</sup> It may be noted that none of the beads recovered from Period I were repeated in this Period, except vase beads of terracotta.

Iron was now extensively used for making weapons and implements. Bone arrowheads were recovered in very large numbers particularly from the lowermost levels of Period II.

Sometime during the first quarter of the period the township was extensively fortified with mud-ramparts (circuit 3 miles) which were topped by fortification walls of burnt brick, constructed at regular intervals but this latter feature was provided sometime after the building of the original rampart.

<sup>1</sup> *Ancient India*, Nos. 10 & 11, pp. 87-88.

<sup>2</sup> V. S. Agrawala, 'Terracotta Figurines of Ahichchhatra, District, Bareilly, *Ancient India*, No. 4 (1947-48) p. 109.

<sup>3</sup> Beck, *op. cit.*

<sup>4</sup> Lal, *ibid.*, fig. 29, No. 7.

Towards the earlier part of the later half, the height of the rampart walls was raised and the brick fortification wall rebuilt possibly with a slight change in the orientation. It is interesting to note that the description of the fort in the Kauṭilya's *Arthaśāstra* very much tallies with the details of the construction as noticed in the city wall of Sravasti.<sup>1</sup>

The excavation could not throw light on the possible factors which inspired the construction of the massive defences. Seen against the larger background of the history of north India of the contemporary period, the defences might have been constructed as a measure against the threat of Indo-Greek invasion. The event synchronizes with the rise of the local kingdom to the position of ascendancy after the break-up of the Mauryan rule. Surprisingly enough, the extensively fortified city had a very short-lived history and the township must have been in ruins not long after the last phase of the construction. Fahien who is said to have visited the city after a couple of centuries found the city almost deserted.

Houses during this period were built of burnt bricks laid in mud-mortar. It was a common practice to construct houses of reused bricks. As was usual on other contemporary sites, ring-wells were provided as part of the civic amenity to the township.

An inscribed sealing recovered from the upper middle phase is of considerable significance in determining the chronology of the site.

Coins were recovered in good numbers and they were mostly of copper. Most of these were corroded beyond all recognition. It may be assumed that the coinage had become an important aspect of the economic life during the period under review. The coins which could give reading fall under three different groups—(1) uninscribed cast, (2) punch-marked and local coinage of Ayodhya. The uninscribed cast coins were generally assignable to the lower levels while the solitary specimen of a rectangular punch-marked coin came from the middle level.

The occupation during Period II came to a close towards the beginning of the Christian era and with that the city seems to have lost its metropolitan character. After some gap, the site continued as an important religious centre which character it retains even to this date but the activities were confined mainly in what is now known as Sahet, the monastic area.

<sup>1</sup> *Arthaśāstra* (ed. by R. Shamshastri, Mysore, 1919), Ch. II.



## / PERIOD—III

As already stated elsewhere, the deposits of this period were noticed in a very limited area. It appears that though the city, as such, was deserted, small sections of the people occupied and built their houses over the earlier ruins in scattered areas. In the excavated trench, immediately overlying the deposits of Period II were found the remains of a settlement which could not be dated earlier than the 4th-5th century A.D. But in the intervening period Sravasti must have had some habitation as is evidenced by the finds from earlier excavations about which a reference has already been made in a previous section of this report.

Pottery in this period, as well, is mainly utilitarian in character and the only decorations that need mention are incised designs on potsherds recovered from the upper levels. It is worth noting that the pottery types of the lower levels do not recur in the upper strata of the excavated trench. Among the few antiquities unearthed, mention may be made of hollow cylindrical terracotta human figures and fragmentary heads depicting foreign ethnic features. Similar figures have been earlier reported from contemporary levels of Ahichchhatra.<sup>1</sup> Terracotta figures of horse were elaborately modelled. The other objects of interest were glass and carnelian beads, knife-blades and spear heads of iron and glass bangles.

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<sup>1</sup> *Ancient India*, No. 4.

## CHAPTER FOUR

### CHRONOLOGY

It is only the dating of Period I and II which is of immediate significance as the levels of Period III, besides being excavated in an extremely limited area, had no relevance to the problem posed earlier and a detailed discussion on the chronology of Period III is thus neither possible nor does appear necessary. Moreover, enough has already been said and written about the later Sravasti in the earlier reports already referred to above.

Since no direct datable evidence has been forthcoming from Sravasti I, the scheme of working the chronology, in the following lines, will be to determine the dating of Period II on the basis of datable finds and work the chronology backwards. Thereafter an attempt will be made to evaluate this dating in the context of the stratigraphical chronology of some of the important excavated sites of northern India.

In the preceding pages a reference has been made to the fact that the habitation of Period II began sometime earlier than the construction of the defences as indicated by the pottery contents of the make-up of mud-rampart. This phase of Period II is not represented in the excavated trench as the mud-rampart was observed to be resting directly over the deposits of Period I. For the purposes of chronology, however, it would be necessary to take into account the phase of habitation mentioned above. The deposits of Period II may be sub-divided as follows :

- (i) The Early Phase : Under this may be included the first phase of the construction of defences as also that earlier habitation of Period II when the city was not yet fortified and the structural Sub-period 1 of the habitation area (SRV-2).
- (ii) The Middle Phase : This would comprise Phases 2 and 3 of the defences and the structural Sub-period 2 of the habitation area (SRV-2). Phase 2 of the defences, however, does not represent any constructional activity.
- (iii) The Late Phase : Under this will be included Phases 4 and 5 of the defences and structural Sub-period 3 of the habitation area.

Several cast uninscribed coins have been recovered from the Early Phase. Although it is difficult to date these coins accurately, the period of origin is usu-

ally assigned to the 3rd cent. B.C. (See below Ch. VII E). Since Sravasti was one of the important cities, it is likely that this type of coin must have been in use not long after it had originated.

An important datable find from the Middle Phase was an inscribed sealing of terracotta. Although the four letters seen on the sealing do not show any marked development from Mauryan Brahmi characters, it would be safe to assume early 2nd century B.C. as a date for this sealing. The cast copper coins continued but in addition, a copper punch-marked coin was also recovered. The coin appears to have been prepared from a cast and may be assigned to second cent. B.C. (See below Ch. VII E).

Late Phase of Period II has yielded a unique square copper coin having close affinity with the local coins of Ayodhya. A date round first cent. B.C. has been suggested for this type of coin. To this phase is also ascribable a teracotta plaque fragment with mouldings and is very much similar to those recovered from Ahichchhatra. These figures were in use on sites in northern India round about late 2nd cent. B.C.

On the basis of the above, the following dates have been proposed for the three phases.

- (i) Early Phase : C. 275 B.C.—200 B.C.
- (ii) Middle Phase : C. 200 B.C.—125 B.C.
- (iii) Late Phase : C. 125 B.C.—50 B.C.

As stated earlier, there does not appear to be a case for concluding a substantial time-gap between the end of Period I and the beginning of Period II. It could, thus, be reasonable to assume that Period I came to a close near about 300 B.C. As for the beginning of Period I, we are on less certain grounds, because of the absence of datable finds but on a rough guess, the habitation in Period I might have begun somewhere between 600-500 B.C. For this assumption, the thickness of deposit is the main criterion as it looks rather unlikely that it would have taken less than 200 years to accumulate 5-6 ft. debris with at least three working levels. Period I may, thus, be dated on a tentative basis as from the middle of 6th century B.C. to 300 B.C.

This immediately brings us to the question of the dating of the Northern Black Polished Ware which is a major industry of the Period I of Sravasti. The dating of Sravasti I, arrived at on independent considerations, confirms the value of Taxila evidence for dating this ware. The testimony of Taxila, as we know, is

based on the stratigraphic position of the N.B.P. specimens, which have been recovered from the levels sufficiently below those yielding the coin hoards.<sup>1</sup> Indeed, there are very many rare objects, e.g. glass, 'eye-beads', leech-beads of agate, carnelian amulet, cylinder bead of lapis lazuli, copper bangle with interlaced knot and others which are common to both Sravasti I and pre-Mauryan levels of Taxila. Thus, taken together the evidence from Sravasti and Taxila would indicate that the main horizon of the N.B.P. Ware clearly antedates much that goes by the label of the Mauryan Period. A word of caution, again, appears justified, for certainly not all N.B.P. Ware could be given a 600-300 B.C. date and much would depend on the context in which the ware occurs, for N.B.P. Ware does appear to have survived much later than 300 B.C.

We may now consider some of the broad implications of the proposed dating of Sravasti I & II in relation to Hastinapura II & III. Apart from the limited quantity of the Painted Grey Ware and plain grey ware, there are many red ware types in Sravasti II which have also been reported from Hastinapura II. Then, there are the Black Polished Ware, and plain Terracotta discs, copper borer and nail-pairer common to both Sravasti I and Hastinapura II. All this tends to indicate that beginning of Sravasti I, if not coeval with later phase of Hastinapura II, could not have been far removed either. As definite datable finds are lacking from both Hastinapura II and Sravasti I, it is considered sufficient to draw the points of similarity. A comparative assessment of the cultural assemblage reveals that Sravasti I (N.B.P. Ware phase), by and large, anticipates much of what is Hastinapura III (N.B.P. Ware) and in fact, Sravasti II. i.e. post N.B.P. Ware phase, contains much that has been earlier ascribed to Hastinapura III, e.g. certain very popular pottery types, terracotta elephant figures, impressed symbols on grey ware discs, crystal and amethyst beads, glass spiral beads and ring-wells. Thus, if the proposed dating of Sravasti I & II is regarded as reasonable, it would be difficult to explain the earlier and later date limits proposed for Hastinapura III, i.e. N.B.P. Ware Phase. Most of the pottery types recovered from Rajgir II, i.e. N.B.P. Ware phase occur in Sravasti I. Although excavations at Rajgir were on a limited scale, the evidence broadly conforms to the sequence as at Sravasti.

At Ahichchhatra the evidence regarding the inter-relationship of Painted Grey Ware and N.B.P. Ware does not appear to be quite definite. Strata VIII

<sup>1</sup> *Ancient India*, No. 1, pp. 55-58.

& VII of Ahichchhatra have certain unmistakable affinities with Sravasti II as indicated by the red ware pottery types, coarse grey ware, and moulded plaques of mithuna figures. Incidentally, the fortification both at Sravasti and Ahichchhatra appear to have been constructed near about the same time, i.e. during Sravasti II and associated with Strata VIII and VII of Ahichchhatra. There is no definite evidence to the effect that the N.B.P. Ware was ever associated with Strata VIII & VII of Ahichchhatra. It is, therefore, not unlikely that Strata VIII & VII of Ahichchhatra may be wholly or partly post-N.B.P. as at Sravasti II. The proposed dating for Strata VIII & VII of Ahichchhatra is (B.C. 300—100 B.C.) roughly corresponding with Sravasti II.

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## CHAPTER FIVE

### THE CUTTINGS

#### SRV—I

As already stated, one of the main purposes was to ascertain the nature of the massive defences and to determine its constructional phases, if any. It is only in the northern area that earlier settlements were concentrated as could be superficially seen from the formation of higher levels. Between *Pakki-Kutti* and *Kachchi-Kutti* and towards the side of the city wall a mass concentration of Northern Black Polished Ware was observed. It was thought that this area could be suitable for laying a trench across the city wall which besides throwing light on the defences may also furnish clues regarding the antiquity of the site and sequence of deposits. Accordingly a trench measuring 120'  $\times$  12' was laid across the north side defences. (Pl. I, Fig. 1)

**PERIOD—I** The natural soil, the yellow sandy loam, was struck at a depth of 21 ft. from the highest point. It was observed that in this area, the defences did not rise immediately above the natural soil but instead, were, encountered the remains of a habitation that must have flourished before the township was fortified. This pre-defence habitation has been called Period I, and the deposits hereunder average a thickness of about five feet. No structures were met with in the area under excavation. A series of post-holes came to light, cut into the upper levels of Period I and forming a right angle on the plan. Whether they belonged to this period or the succeeding is difficult to say. They were sealed by the earliest phase of the defences. (Pl. VI)

A feature of the deposit in this period was the presence of pits—often of unusually large size. These were not the common refuse pits but their filling consisted of lumps of burnt logs and fine pottery including complete shapes which may indicate that the pits might have had some special purpose. (Fig. 2)

**PERIOD—II** In the limited area under excavation, the rampart-wall was observed to be directly resting over the deposit of Period I, but the pottery recovered from the make-up of the defences, contained essentially the material from Period II indicating thereby, that the defences could not be associated with the beginning of Period II. (Fig. 2)

Phase 1: In the earliest phase, the defences consisted of a massive clay rampart with a basal width of 90 ft. and the maximum available height in the middle of the trench is seven feet. Towards its northern extremity the mud-rampart was not resting over a flat ground surface but was laid in a slope. This is obviously due to the fact that the builders of the rampart followed the configuration that was readily available. It is thus clear that the habitation during Period I did not extend beyond this point.

The make-up of the rampart has yielded quite a good quantity of pottery. Section scraping of a portion of the southern defence wall revealed that the rampart clay here was appreciably free from pottery. The difference is apparently due to the fact that on the south side the earlier habitation remains are practically negligible (see above).

Phase 2: In this phase, the city wall was neither repaired nor rebuilt but instead there are indications that for a time being, the defences were not used as such but the area being on the outskirts of the township was utilized as a temporary dumping ground. This is indicated by a heterogenous deposit consisting mainly of pottery dump. (Fig. 2)

To this phase is ascribable a series of ring-wells built in close proximity of each other. The working level of these ring-wells could not be determined because of a later disturbance. (Pl. VIII)

Ring Well—A: This was exposed to thirtytwo courses of plain terracotta rings (square in section) but its bottom could not be reached. The diameter is 22 inches. The top courses have been disturbed by a pit.

Ring Well—B: This had thirty courses of pottery rings excluding the top courses which were removed by a later pit. It has a diameter of 22 inches.

Ring Well—C: This had again thirty courses of pottery rings excluding the top courses which were disturbed and had a diameter of 17 inches.

Phase 3: To this phase is ascribable a wide brick wall with 23 courses and has the same alignment as the defences. The courses have a neat facing on the sectional elevation indicating that the wall did not continue eastwards. The structure was directly connected with the rampart and perhaps served as a brick fortification wall and a series of such walls appear to have been built at regular intervals. The size of the bricks used is 17" to 18"×9"×3". (Pl. V)

Phase 4 : In this phase, the height of the mud-rampart was further raised and part of the structure mentioned above must have been covered up with the mud-filling used for raising the height.

Phase 5 : A wide brick wall available to a height of some courses was built over the rampart filling of Phase 4. This structure too had similar orientation as the defence wall. The southern face of the structure had a curve apparently in keeping with the existing alignment of the mud-rampart. The purpose of the wall must have been the same as that of the similar structure in Phase 3, mentioned above. Possibly there was no time gap between Phases 4 and 5. The deposits of a later period were not encountered in the Cutting SRV—1. (Pl. V)

#### SRV—2 (Pl. IX Fig. 3 & 4)

In order to get an idea of the sequence of the later deposits and also to check up the results obtained from SRV—1, a trench measuring 36 ft.  $\times$  15 ft. was taken in the habitation area. In this trench the deposits of Period I were not met with nor was the natural soil reached although the trench was dug to about 4ft. below the expected level of the natural soil as known from SRV-1. It appears that occupational debris of period I, if any, together with the underlying natural soil had been removed by a later disturbance and as a result a depression was formed. Subsequently this must have been covered by a filling of Period II, consisting of loose earth and potsherds. This deposit was sealed by a uniform clayey deposit over which was built the earliest structure of Period II. The clayey deposit looks as if the ground was deliberately levelled up for the subsequent building activity of the Period II.

Period—II : It had three structural sub-periods. To Sub-period I, were ascribable walls, 1, 2 and 3, walls 1 and 3 were fragmentary with three and two courses respectively. Wall 2 has a width of 16" and was available to a height of five courses. An interesting feature of this structure is the presence of a post-hole cut in the masonry. (Pl. IV)

The average bricks used in this Sub-period are of 16" to 17"  $\times$  9"  $\times$  3". Belonging to Sub-period 2 were wall 4 and its cross wall 4 A. Wall 4 was available to a height of seven courses of complete bricks. The size of the bricks used was 13"  $\times$  9"  $\times$  2".

It is interesting to note that sizes of the bricks in Sub-periods 1 & 2 roughly correspond with those in Phases 3 and 5 respectively of the defences at SRV-1.



To Sub-period 3 is ascribable a fragmentary wall 5.

Period—III: It had three structural Sub-periods. To Sub-period 1 is ascribable wall 6, available to a height of four courses of bricks, the complete ones measuring  $8\frac{1}{2}'' \times 6'' \times 1\frac{3}{4}''$ .

To Sub-period 2. were ascribable wall 7, parallel wall 7 B and the partition wall 7 A. The lower three to four courses on foundation were given an offset of about 2'', On the plan the walls make an enclosure of  $24' \times 8' \times 15'$ . The size of the bricks is  $8\frac{1}{2}'' \times 9'' \times 2''$ , some of which were moulded.

To Sub-period 3 was ascribable wall 8 having four courses of bricks and only a very small portion of the structure is seen in the excavated trench.

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## CHAPTER SIX

### THE POTTERY

Pottery recovered from various levels of the excavation in fairly large quantity constitutes an important piece of evidence. Its chief interest lies in the fact that each of the three cultural periods mentioned above shows its own individualistic tradition in the art of pot making and this phenomenon is the main determining factor behind the differentiation of the periods. It is, therefore, considered appropriate to study the pottery of the three periods separately.

#### PERIOD—1 (Pl. XI-XII & Fig. 5-13)

In the entire range of the pottery recovered from this period, two strains are clearly distinguishable, viz. (i) 'Black Ware' including shades of grey and a limited number of painted wares, and (ii) Red Ware. It is not merely the outer colour that distinguishes the two groups but, as will be seen below, their separate entities are more clearly defined on account of wide variance in shapes and also the surface-treatment.

(i) *The 'Black' Wares* : In this group are included the well known varieties, viz. Northern Black Polished Ware, Polished Black Ware, Black and Red Ware, Painted Grey Ware, besides a few hitherto unknown varieties both in painted and unpainted categories. All of these will be considered individually in some detail in the following lines.

Even though there is a fair amount of variety in the group mainly in the colour and the degree of finish, the wares enumerated below may justifiably be construed as sub-variations within a single homogenous pattern and linked by certain common features, e.g. (i) similar tradition of shapes which with a few exceptions restricted to deep bowls and wide-mouthed dishes, (ii) the nature of clay used which is finely lavigated and does not show any trace of tampering material, (iii) thickness of walls and lastly (iv) the technique of firing which shows that the pots were generally fired in a reducing condition resulting in grey cores and the outer surface turning black or its modifications.

In this group, pots show a good deal of colour variations and the colours commonly met with are jet black, bluish black, brownish black, dark grey, ash grey, greyish buff, pinkish buff, tan, orange, brownish red, light red and red.

Not all of these variations were intentional. In this connection, it is pertinent to refer to a detailed examination by Keslo and Thorley<sup>1</sup> carried on Palestinian pottery and 'Chamelon' nature of iron in red clay was observed to be responsible for modifications in colour. Gordon<sup>2</sup> rightly asserted that explanation given by Keslo and Thorley would account for the very wide range of colours recorded at many sites in India. Sravasti was no exception to this.

We may now consider individually some of the important varieties in 'Black' Ware.

A. Northern Black Polished Ware (Fig.5): Perhaps no other pottery from northern India has evoked so much interest as this ware because of its wide distribution and also due to the stratigraphical context in which it has been observed at some of the sites notably at Hastinapura<sup>3</sup>. In the earlier stages of enquiry the ware was thought to be similar to the 'Greek Black' and its introduction in India was thus ascribed to the advent of Greeks in the sub-continent. This view was discarded in the wake of overwhelming evidence from Taxila where eighty percent of sherds were observed to have come from levels which antedated the arrival of Greeks by a considerable margin. Even superficial likeness on grounds of texture has been questioned in view of several differences between Greek Black and Northern Black Polished Ware<sup>4</sup>.

Simultaneously with the realization of its potentialities enquiries were directed towards obtaining an explanation for the brilliant lustre, by means of chemical analysis. The commonly accepted explanation that the unfired pots were subjected to elaborate burnishing and polishing has been recently questioned but as yet no definite explanation to account for the surface layer has been forthcoming.<sup>5</sup>

At Sravasti, Northern Black Polished Ware is a major industry throughout Period I and accounts for nearly sixty per cent specimens under the 'Black Ware' group. The numerical proportion of this site is in sharp contrast to that of

<sup>1</sup> J. L. Keslo and J. Palin Thorley "The Pottery Technique at Tell Beit Mirsim", *The Annual of the American Schools of Oriental Research*, XXI-XXII, 1943.

<sup>2</sup> D. H. Gordon, "The Pottery industries of the Indo-Iranian border—a Restatement and Tentative Chronology," *Ancient India*, Nos. 10 & 11 (1954-55), p. 176.

<sup>3</sup> Lal, *op. cit.*

<sup>4</sup> A detailed discussion on the distribution and chronology of Northern Black Polished Ware is available in *Ancient India* Nos. 10 and 11 pp. 50-51. see also R. E. M. Wheeler, *Early India and Pakistan* (1959) pp. 30-31.

<sup>5</sup> Wheeler, *ibid.*, p. 30.

Hastinapura<sup>1</sup> where total number of specimens unearthed during the two seasons, work is only a meagre 101. This is of considerable importance as the evidence of Northern Black Polished Ware at Sravasti differs from that of Hastinapura in yet another and a more significant context. The red ware assemblage associated with the Northern Black Polished Ware at Sravasti on the one hand and Hastinapura on the other have not much in common and there is reason to believe that at the latter site, the ware is seemingly in a late context.

A large proportion of Northern Black Polished Ware specimens at Sravasti has strikingly thin walls and in this respect, it can be very well compared with the Painted Grey Ware which as a rule, has a thin section<sup>2</sup>. Northern Black Polished Ware in its earlier stage consisted of pots generally with thin walls and the thickness increased at a latter stage remains to be seen by checking from other sites. But if published specimens from Hastinapura are any index to the assemblage as a whole, the proportion of thin sectioned specimens is very much less.

The surface colour is generally jet black outside and bluish black or brownish black inside, but apart from this generality, a wide range of colour variations is met with reference to which has already been made in the preceding lines. Special significance attaches to a group of specimens which show two grades of finish having been employed on one vessel—the upper portion of the body has the typical lustre of Northern Black Polished Ware while the lower portion a less superior finish and not dissimilar to the 'Black Polished Ware',

A limited number of specimens bear prominent burnishing marks but as these pieces do not show the same lustre as is retained by top-graded Northern Black Polished pieces it is more than doubtful if all the specimens were subjected to burnishing (see above).

Bowls and dishes are the commonest types but there are a few interesting uncommon shapes, e.g. bottle-necked jars, vases and corrugated bowls. These shapes have not so far been reported from any of the sites where Northern Black Polished Ware has been noted to be in restricted supply. Corrugated bowls are fairly common at Sravasti generally from lowest levels of Period I, both in Northern Black Polished Ware and Black Polished Ware and some of the shapes,

<sup>1</sup> *Ancient India* Nos. 10 and 11, p. 51.

<sup>2</sup> *Ancient India* Nos. 10 and 11, p. 51.

particularly type 12, are similar to the ones found at Hastinapura from Period II.

B. Black Polished Ware (Fig. 6) : This is a burnished ware showing a smooth black surface, grey core and generally thin section. The specimens of this ware were recovered from Period II of Hastinapura in association with the Painted Grey Ware and the ware was conjectured to have been the precursor of the Northern Black Polished Ware which occurred in Period III of Hastinapura<sup>1</sup>. The fact of Northern Black Polished Ware and Black Polished Ware occurring together in Sravasti lends weight to this assumption, as Sravasti I presumably reveals that intervening phase wherein though the use of Northern Black Polished Ware was widely known, the slightly inferior Black Polished Ware was not completely discarded as was the case in Hastinapura III.

It is interesting to note that the limited excavation at Rajgir in 1950 produced a black ware having smooth surface in association with the Northern Black Polished Ware<sup>2</sup>.

C. Black & Red Ware (Fig. 6) : The ware is of limited occurrence and includes apart from the usual black and red, other modifications, e.g. brownish red and dark grey or jet black. The colour combination was produced by the process of inverted firing. The pots, as a rule, show smooth surface. There are a few specimens which have a glossy finish as in the Northern Black Polished Ware. The shapes are restricted to bowls and dishes. In northern India, black and red ware is reported from Painted grey ware levels of Hastinapura and Kannauj<sup>3</sup>, N.B.P. levels of Sonapur<sup>4</sup>, and Rajgir<sup>5</sup>.

D. The painted Wares (Fig. 7) : The following categories are met with (i) black-on-ash grey (Painted Grey Ware—T. 41-43) (ii) buff-on-black—T. 44-47, (iii) black-on-brownish grey (iv) black set off against red and (v) red-on-red or brownish red. A very limited number of specimens have been unearthed in each case—the number seldom exceeding a dozen. The Painted Grey Ware with only five or six specimens is extremely scarce. A sizeable bowl fragment in this ware

<sup>1</sup> *Ibid.*, pp. 41, *India Archaeology 1955-56 Review*.

<sup>2</sup> A Ghosh, *Ancient India* No. 7, p. 71.

<sup>3</sup> *Indian Archaeology 1955-56—A Review* (New Delhi, 1956), p. 19.

<sup>4</sup> *Indian Archaeology—1956-57—A Review* (New Delhi, 1957), p. 19.

<sup>5</sup> *Ancient India* No. 7, p. 72.

painted both on the inside and outside has the typical shape and design of the many Painted Grey Ware bowls from Hastinapura. Of considerable significance is a Painted Black Ware showing designs in creamy to yellowish buff over a polished black surface. In most cases inside is grey and the painted designs consist of oblique strokes arranged in groups and are reminiscent of similar patterns on the Painted Grey Ware specimens. The painted surface has a tendency to rub off easily and it is likely that the painting was post-firing. The shapes are restricted to vases alone. The buff-on black ware has not been reported from any other site so far.

The most interesting specimens in the painted group are a few sherds in which a design in black is set off against a surrounding red glazed area, so that there is no overlap between black and red areas. The technique appears to be very much different from the commonplace method of painting the unfired pots with pigment-dipped brush wherein painted surface formed a separate layer superimposed over the plain one. The ware has not so far been reported from any of the sites in India. Looking for the parallel elsewhere, the manner of execution appears to be vaguely similar to the one noticed on Attic vases. Richter<sup>1</sup>, writing on 'Accidental and Intentional Red Glaze' on Athenian vases, has examined various suggestions to explain the procedure and concludes by agreeing with the solution offered by Mr. Schuman. As the explanation holds good for specimens from Sravasti as well, the same is being repeated as follows.

'At the beginning only those parts of the vases that were to come out black were painted, the vases were then placed in the kiln and subjected to the first two stages of the firing—reducing and oxidizing. The firing was then interrupted, the pieces allowed to cool and taken out of kiln; whereupon those parts were painted that were to come out red; finally the pieces were replaced in the kiln and fired in an oxidizing condition. The newly painted areas came out red, since they had undergone no reduction, whereas the previously painted parts, having been through the reducing fire and having had a thick application of glaze, remained black'<sup>2</sup>.

Although the procedure is complicated and the ware is of limited occurrence at Sravasti, it is extremely doubtful if the pots were directly imported. The sha-

<sup>1</sup> G. M. A. Richter, "Accidental and Intentional Red Glaze on Athenian Vases," *The Journal of the British School at Athens* XLVI (1951) pp. 143-150.

<sup>2</sup> Richter, *ibid.*, p. 146

pes and designs are no different than the ones which commonly occur in other wares of the group under 'Black Ware'. A more satisfactory explanation would be that the local potters had managed to learn the procedure by contacts and might have used it as an experimental measure, which accounts for the limited occurrence. Instances of intentional red glaze outside India, have been observed to range in date from 540 to 460 B.C. and had a wide distribution (Greece, Cyprus, Rhodes, Russia, Italy, etc.).

E. Others : Apart from the above main sub-divisions of 'Black Wares', there are a few specimens which show a combination of two colours often separated by an intervening horizontal band. A few sherds, mainly in black polished ware, show graffiti marks.

A plain grey ware, extremely limited in number, has also been found occurring in the levels of Period I and is different from the thick and, often, coarse grey ware of the succeeding period. It may be noted that the plain grey ware occurs in abundance alongwith the Painted Grey Ware at Hastinapura.

(ii) *Red Ware* : The red Ware from Period I is marked by the presence of a great variety of pot-forms and as many as fifty-five different shapes have been recorded.

As a rule, the ware is well-made. The clay is generally free from impurities and coarse and gritty coarse clay are seldom met with. The pots were evenly burnt in an open kiln. A vast majority is devoid of slip. The upper surface in some cases, was deliberately made rough. The ware is generally wheel turned but in a few cases, the bodies were handmade, while the rims and back portions were turned on a wheel.

The commonest shapes are jars with splayed out rim (I), globular vases (VI) collared basins (XXVI) and necks. Except these, all other shapes were available in restricted numbers. Some of these were definitely rare.

An interesting feature of the Red Ware assemblage is the occurrence of an unusually large number of miniature vessels (XXXII to XLVIII). Most of these were recovered intact from large pits. In view of their peculiar shapes and restricted frequency it is unlikely that all of them were meant for commonplace needs. Some of these might have catered to the ritualistic needs of the people.

The 'Red Ware' assemblage of Period I consists of many shapes which have their analogues in Hastinapura II (P. G. Ware phase). Some of the less common

types have their parallels in Hastinapura III, but these are quite rare. Comparable shapes are also available from the Northern Black Polished Ware levels of Rajgir.

A group of specimens show incised designs or sometimes stamped pattern on the jars and vases. The patterns consist of chevrons, criss-cross, cord-pattern and ripple marks. It may be noted that most of the specimens are from early and middle levels. The designs superficially recall some of the incised patterns on the red ware from the chalcolithic levels of Navda Toli. This may not indicate any direct contact as designs are too simple and stereotyped as to preclude an independent origin. (Pl. XII, Fig. 13)

### NORTHERN BLACK POLISHED WARE

(Types 1-21)

(Fig. 5)

1. Medium-sized dish (diameter 11") with a rounded body and an everted rim. It has a jet black exterior but the inside shows patches of grey and light brown. It is a common type of the earlier levels and is available in Polished Black and Black and Red Wares as well. From an early level of Period I. Variant I—A has a more rounded body which has a tendency to thin out at the base. The inside is brown. From a middle level of Period I.

2. Large-sized (diameter 15") dish with an internally cut rim. This is a common type of upper levels of Period I. The type is also met with in the Black Polished Ware. Variant 2—A has an internal thickening of the rim portion. Variant 2—B, a rare type, has a flattened rim and closing body. From an upper level of Period I. It is interesting to note that this is among the very few types wherein the walls have medium thickness.

3. Dish with an externally collared rim and thin walls. The type is also available in Black Polished Ware, but is among the less popular types. From an upper level of Period I. Variant 3—A has a more pronounced collar and rounded body. From an upper level of Period I. Variant 3—B is a dish-cum-bowl, with a slightly convex body. From an upper level of Period I.

4. Dish with an externally cut and pinched rim and the body closing in from a convex waist. A distinguishing feature is a ledge below the rim.

5. Medium-sized bowl with a featureless rim and showing a thin black band on the outside above the base. The band acts as a dividing line between



the two grades of surface finish seen on the exterior, the portion above the band shows the regular Northern Black Polished Ware finish while the lower part has only a smooth surface lacking the fine lustre of the surface above the band. From an upper level of Period I. The specimen is a noteworthy example illustrating how two grades of finish were employed not merely in the same period but actually on the same vessel. From a lower level of Period I. Variant 5—A has a grooved exterior while Variant 5—B shows grooves on the inside.

6. Wide-mouthed shallow bowl with a featureless rim and mildly grooved exterior. From a middle level of Period I.

7. Deep bowl with a featureless rim and thin walls. A distinguishing feature is a black band on the outside above which are seen prominent marks of burnishing. From a middle level of Period I. Variant 7—A has a wider mouth and on the outside are seen patches of black and greyish buff, the result of accidental firing. Variant 7—B shows graffiti marks.

8. Base fragment showing a flat base with a knob. Variant 8—A has also a flat but thickened base. From a lower level of Period II.

9. Lid-cum-bowl with a featureless rim and a ledge below it and having a rounded body. While Variant 9—A has a less pronounced ledge than the arch type, Variant 9—B shows a prominent ledge. From an upper level of Period I. This is a fairly common type throughout the Period. Analogous type is available from Period II of Rajgir.

10. Miniature lid-cum-bowl similar to the above, distinguished by the presence of a perforated lug-handle. From a lower level of Period I.

11. Dish-cum-bowl with a vertical and sharpened rim, while the outside is black, the inside shows orange red. The shape is also met with in red and black ware. From a lower level of Period I.

12. Deep bowl with corrugated sides and featureless rim. The exterior surface has greyish buff tinge while the inside is dark grey. The corrugated bowls are common but generally confined to lower levels. The type is also available in Black Polished Ware. From a lower level of Period I. The chief interest of the type lies in the fact that it closely recalls the corrugated bowls in the Painted Grey Ware from Hastinapura Period I. Variant 12—A shows closer corrugations. It is interesting to note that rim portion and the inside

shows more brilliant finish than the rest of the body. On the out side are seen patches of red, a result of unintended infiltration of oxygen indicating that the kiln was not securely closed. From a lower level of Period I.

13. Corrugated bowl with a closing rim and a rounded base. From a lower level of Period I.

14. Shallow bowl with a sharpened rim and having its sides expanding from a convex base. It is distinguished by prominent grooves on the outside. It has an unevenly finished surface. Except for the grooves, the shape is very much akin to the Polished Black Ware bowl from Hastinapura (cf. type XXXVII). From a middle level of Period I.

15. Bowl with an internally thickened and pointed rim. From a lower level of Period I.

16. Basin fragment with an inturned and prominently thickened rim and showing a slight depression on the inside below the rim. Though a common shape in the plain red ware, it is rare in this group. From an upper level of Period I.

17. Lid with a thickened base, indeterminable terminal and a knob on the inside. From a lower level of Period I.

18. Miniature lid with a flanged base. It is a fairly sophisticated shape and was perhaps meant to be used as a covering for the jar type 19. From a lower level of Period I. The type is available in Black Polished Ware as well.

19. The shape together with 19-A & 19-B illustrates a unique bottle necked jar having an out-turned rim and ovoid body. The neck was joined to the body the two portions having been luted together by inserting the neck-portion in the body, and as the neck was too long and narrow to permit the finger, the luting was done with the help of a thick reed, the marks of which are clearly visible on the inside. The pots have burnt grey inside. From an upper level of Period I. The type is available in Black Polished Ware as well.

20. Necked vase having an out-turned and externally thickened rim. From a middle level of Period I. Variant 20—A differs from the above in having a prominently grooved interior. From a middle level of Period I.

21. High-necked jar with a flaring and externally thickened rim. From a middle level of Period I.

## BLACK POLISHED WARE

(Type 22-33)

(Fig. 6)

22. Convex-sided dish with a featureless rim. In this category of dishes only the exterior shows a black polished surface, the base and the inside portion have burnt either grey or bluish grey. Variant 22—A shows a gradual thickening of the base portion. From a middle level of Period I.

23. Dish with an everted rim and showing a carination at the base. Carinated dishes are not very common and are met with only in this class of ware. It is interesting to note that the shape commonly occurs in Period II of Hastinapura (type XXV and its variants). Variant 23—A differs from the above in having a less pronounced carination. From a middle level of Period I.

24. Dish with an internally cut rim. It is distinguished by an inconspicuous ledge on the outside below the rim portion. While the outside is jet black, inside shows patches of dark grey and black. From a lower level of Period I.

25. Small-sized dish (diameter—7½") with a featureless rim. From an early level of Period I.

26. Bowl with a vertical and sharpened rim and a flat base. This is a common type. From an early level of Period I. Variant 26—A differs from the above in having slightly thickened walls. From an early level of Period I. In this shape, there are a few instances wherein the upper portion on the outside shows a dark grey colour.

27. Medium sized bowl having incurved sides and featureless rim. It is distinguished by having a prominent cordon in the mid portion. From an early level of Period I.

28. Bowl with corrugated walls and a vertical and sharpened rim. On the outside the thin film of the polished surface has peeled off considerably thus leaving the mat surface. Variant 28—A is the lower portion of a closely corrugated bowl. Variant 28—B besides being of a larger size shows an external projection below the rim. From an early level of Period I.

29. Large-sized bowl (diameter 9") having straight sides and an externally thickened rim shows a simple groove on the outside. It has a near Northern Black Polished finish. From a late level of Period I.

30. Fragmentary neck of a jar having an out-turned rim and ribs on the exterior. The type is also available in red ware. From an early level of Period I. Variant 30—A has less pronounced ribs and a thickened rim.

31. Medium-sized jar having a globular body and a flaring rim. The type is rare in this ware. From an unstratified deposit of Period I.

32. Lower portion of miniature vase having a rounded body, flattened base and a grooved exterior. The upper part of the constricted neck is missing. From a mid level of Period I.

33. Lower portion of a unique miniature vessel having a prominent ledge in the mid portion and flat base. From an upper level of Period I.

### BLACK AND RED WARE

(Type 34-40)

(Fig. 6)

34. Incurved sided dish with a flat base and a featureless rim. Instead of red outside and jet black inside, specimen shows a brownish red and an uneven black. It has the typical glossy surface as in the Northern Black Polished Ware. Variant 34—A differs from the above in having a dark grey surface on the inside and the base portion. From the lowermost level of Period I.

35. Platter with a vertical and featureless rim and a blunt carination at the waist. The specimen shows black inside but on the outside patches of black are seen along with red apparently the result of uneven firing. Variant 35—A has an everted rim and convex body. From the lowermost level of Period I.

36. Large-sized dish having slightly incurved sides. It has the usual scheme of red on the outside and the base and the inside shows an uneven black combined with dark grey. From an early level of Period I.

37. A Bowl with a featureless rim. The outside is partly red and partly black, while the inside is black. This is a fairly common type. From a middle level of Period I.

38. Deep bowl with a sharpened rim and a prominent groove below it. Inside is black while outside is unevenly red with patches of black. It has a smooth surface. From a very early level of Period I.

39. Deep bowl having a vertical sharpened rim has an external ledge below the rim. It shows black inside and red and black on the outside and has a highly polished surface. From an early level of Period I.

40. Fragment of a unique bowl having a sharpened rim corrugated below the rim portion. It shows black inside and red outside with the rim portion. Outside is black. The specimen shows a brilliant glossy surface like the top-graded specimen of Northern Black Polished Ware. From the lowermost level of Period I.

### PAINTED WARES

(Type 41-56)

(Fig. 7)

41. Fragment of a straight-sided bowl of fine grey ware having a sharpened rim and prominently grooved on the mid portion. It is painted in black on the outside with a treble row of dots above the grooved mid portion, below which is yet another design showing rows of dots bordering on either side of an oblique stroke. On the inside is a painted design consisting of groups of five curved strokes. The shape of the vessel as well as the pattern of the painted design are typical of Hastinapura II specimens. From an early level of Period I.

42. Sherd, presumably base fragment of a dish of painted grey ware showing thin strokes in black over grey surface. From an unstratified level of Period I.

43. Fragmentary base of grey ware dish painted with dots in black over grey surface. From an early level of Period I.

44. Fragment of a vase of black polished ware inside grey painted in buff over black with a design formed by multiple groups of four oblique strokes each, not arranged in any order. Here again the painted design including the method of executing strokes is reminiscent of designs on the Painted Grey Ware. From an early level of Period I.

45. Fragment of a vase of Black Polished Ware painted in buff with a design formed by groups of dots four in each group. From an early level of Period I.

46. Fragment of a vase of Black Polished Ware painted with a fish-scale like design executed in buff over black. The pigment has a tendency to peel off indicating that it had not completely fused with the body fabric. From a mid level of Period I.

47. Fragmentary neck of black polished ware painted in buff with an indeterminate design formed by a series of vertical strokes executed over a grooved surface. From a mid level of Period I.

# ŚRĀVASTĪ 1959

## SECTION ACROSS THE DEFENCES AT SRV-1

SCALE OF 2 1 0 2 4 6 8 10 12 14 FEET

SCALE OF 1 0 1 2 3 4 METRES

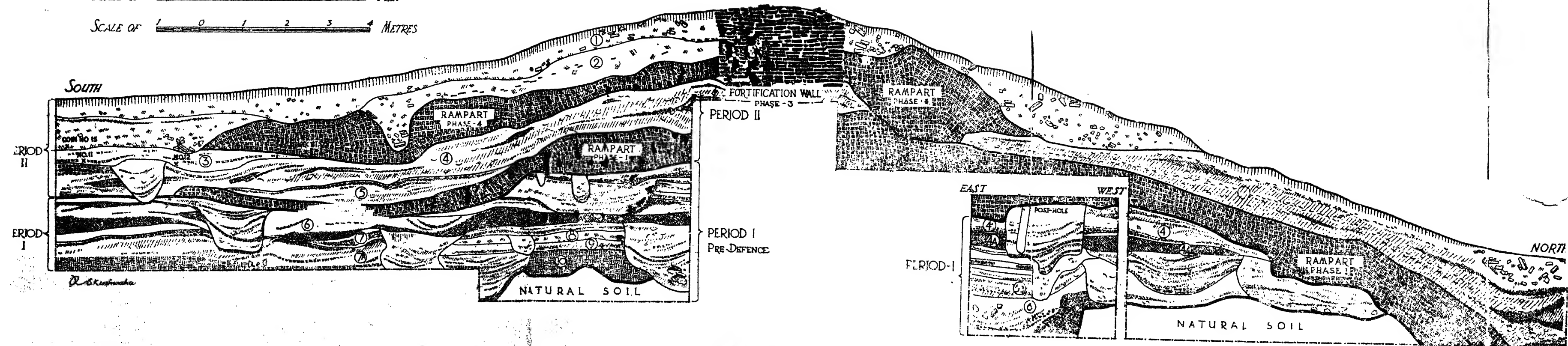
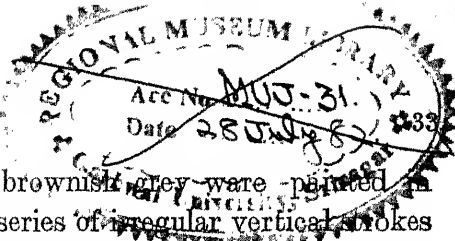


Fig. 2. Section across Defences



CAL

THE POTTERY



48. Base fragment of a highly polished brownish grey ware painted in black, on the outside with a design formed by a series of irregular vertical strokes and on the inside with an indeterminate design formed by vertical horizontal bands. The boldness of strokes and their indifferent execution is worth noting. From a middle level of Period I.

49. Base fragment of a dish of polished brownish grey ware, painted with irregular dots. From a middle level of Period I.

50. Bowl fragment of a glossy red ware with the design picked up in black and formed by a series of oblique bands, both on the outside and inside. The Ware has the typical glossy finish of the Northern Black Polished Ware. The manner of execution has been dealt in detail in the introduction. From a lower level of Period I.

51. Similar to the above with the difference that the rim portion on both the sides shows a black band. From a middle level of Period I.

52. Base fragment of a bowl of glossy red ware showing a sun like design picked up in black against red. From an upper level of Period I.

53. Dish fragment of red and black ware showing a design formed by parallel vertical strokes in black over red surface. Here again the technique appears to be similar to the one employed in Nos. 50-52. As is evident in the specimen the designed portion that was to come out black was first outlined and as the application of glaze was not uniformly thick, the black strokes have not come out evenly. From an unstratified deposit of Period I.

54. Base fragment of a dish of red ware painted in black with an indeterminate design in black over red surface. Specimens of this type are available in fairly large number at Ahichchhatra but are not very common at Hastinapura. From an early level of Period I.

55. Base fragment of a dish of red ware painted with parallel bands in red over brownish red surface. From an early level of Period I.

56. Bowl fragment of thin grey ware painted in black with a horizontal band on the outside. The portion above the line shows a yellowish surface while below it is seen a dark grey surface. From a middle level of Period I.

57. Base fragment of a bowl of black polished ware bearing a stamped design of a ring of dots encircling a dot. In addition, the fragment shows a *grafitti*. From a middle level of Period I. (See also pl. XI)



## RED WARE

(Fig. 8-12)

I. Fragment of a jar of dull red ware having a splayed out rim slightly thickened at the mid-portion. Only the rim has been turned on the wheel while the rest of the body is hand-made. Of medium fabric, it has been treated with a thin wash on the inner portion only which was exposed to view. The core shows a uniform texture, the clay having been made free from impurities. The type is common in Hastinapura I. It is one of the commonest shapes at Sravasti, particularly of the early levels. Variant I A of thicker walls has an externally cut rim and has burnt dark grey in the rim portion. From an early level of Period I.

II. Fragment of a storage jar with a clubbed rim and a convex outer profile of the neck portion. Of coarse fabric, it has been treated with an ochre coloured wash. While the body has burnt red, the base is dark grey. From a late level of Period I. This is a very common type in this period occurring throughout. The type is reported from Hastinapura II. Variant II B has a practically decorated rim. From a late level of Period I.

III. Fragment of jar of dull red ware with an externally thickened rim and convex outer profile. It is grooved on the inside below the rim. Of medium fabric, it is treated with a thin wash on the rim portion alone. From an early level of Period I.

IV. Fragment of a jar of dull red ware with a clubbed rim and a thickened neck, prominently grooved on the outside. Of distinctly coarse fabric it is devoid of any slip or wash. Use of husk as *degraisant* is indicated. It has not been evenly fired. This is one of the rare specimens of this period wherein the pot shows a distinctive coarse fabric. From a mid level of Period I.

V. Fragment of a jar of red ware with a vertically cut rim and a flaring neck, bluntly carinated on the inside. The core shows a uniform texture. The rim portion has been treated with a wash but the surface of the rest of the body on the outside has been made deliberately coarse by applying a coat of clay mixed with powdered grit. From a late level of Period I. Variant V A has a more vertical neck and does not show the coarse outer surface. From a late level of Period I.

VI. Jar fragment of dull red ware with a vertical high neck and a flaring rim. Of medium thickness, it has a fairly even texture and is well burnt. Here again the rim has been turned on the wheel while the rest of the body is hand-

made. The outer surface has been made coarse as in V. From a middle level of Period I. Variant VI A differs from the above in having an externally cut rim and a painted upper portion. From a middle level of Period I.

VII. Jar fragment of dull red ware with an externally thickened rim and a concave neck, prominently grooved on the inside. Of medium thickness, the even texture shows the use of well levigated clay. From an upper level of Period I.

VIII. Jar fragment of dull red ware with an out-turned externally cut rim and a prominently flared neck. Of medium fabric it is devoid of any slip or wash. From a lower level of Period I. Variant VIII A has a horizontally splayed out rim. From a lower level of Period I.

IX. Fragment of a vase of dull red ware with an out-turned rim and a vertical neck. Of thin section it has an even texture and is without any slip or wash. From an upper level of Period I. Variant IX A has thicker walls and an externally cut rim. From an upper level of Period I.

X. Vase fragment of red ware with a flaring rim, thickened at the neck portion. Of medium fabric, it has been treated with a bright red coloured wash on the rim portion only and shows a burnished surface. From a mid level of Period I. Variant X A shows a deliberately made coarse surface on the inside, below the top of the rim. From a mid level of Period I.

XI. Upper portion of a vase of red ware with a flaring rim thickened at the neck portion, which has been turned on the wheel, while the rest of the body is hand-made. Of fine to medium thickness, it has a uniform texture, signs of uneven firing are seen on the surface. Marks indicating the use of dabber are also seen on the body. From an early level of Period I. Variant XI A shows an internal carination, besides being of a smaller size. From a mid level of Period I. Variant XI—B has a splayed out rim. From an unstratified deposit.

XII. Fragment of vase of pinkish red ware with a splayed out rim and ovoid body. Of thin section it has an even texture only, the rim has been turned on the wheel, while the rest of the body is hand-made. From an early level. Variant XII A has a slight inside depression on the rim and blunt carination at the neck. From an unstratified deposit of Period I. Variant XII B illustrated the smaller size in the group. From an early level of Period I.

XIII. Fragment of a vase of red ware having a vertical and thickened, bluntly carinated neck portion. It has an inside depression on the rim and a

ledge below it. Of fine fabric, it is devoid of any slip or wash but shows a smooth surface. The shape is somewhat similar to XIX of Hastinapura II. From a mid level of Period I.

XIV. Vase of pinkish red ware with an externally thickened and collared rim and a globular body. Of thin to medium fabric, it is devoid of any slip or wash. From an early level of Period I.

XV. Vase of red ware of medium size with an externally beaked and internally collared rim. Of thin fabric it is devoid of any slip. From an early level of Period I.

XVI. Fragment of a vase of red ware with thickened rim and globular body which starts abruptly from the rim. Of medium thickness, it shows a uniform texture and is treated with a red wash on the outside. This is a very common type occurring throughout and is also reported from Hastinapura II. From a middle level of Period I. Variant XVI A has a nailheaded rim and has burnt grey with patches of red on the outside. Variant XVI B shows a mild depression on the top and has a distinctive bright red slip. From a middle level of Period I.

XVII. Fragment of a vase of red ware with an externally thickened rim and an ovoid body which starts abruptly from the rim. Of thin section, it is devoid of any slip or wash. From a middle level of Period I.

XVIII. Fragment of a straight-sided bowl of red ware with an externally thickened and collared rim. Of fine fabric, it has been treated with a wash on the outside only. From a late level of Period I. Variant XVIII A has slightly closing sides and thicker walls. From a late level of Period I.

XIX. Bowl of red ware with an externally thickened rim. Its distinctive feature is the perforated base. Of fine fabric, it is devoid of any slip or wash. From a lower level of Period I.

XX. Base fragment of a perforated vessel. Of medium fabric, it has a uniform texture. From a mid level of Period I.

XXI. Fragment of a bowl with an out-turned rim and an expanding mouth. Of fine fabric, it is treated with a red wash on both inside and outside. From an upper level of Period I. Variant XXI A differs from the above in having thicker walls and a painted rim. From an early level of Period I.

XXII. Straight-sided bowl of dull red ware with a sharpened rim. Of fine fabric it is devoid of wash on slip. This type occurs in grey ware as well.

From a very early level of Period I. Variant XXII A has thicker walls. From an early level of Period I. Variant XXII B is a shallow bowl and has weak ledge below the rim. From an early level of Period I.

XXIII. Lid of red ware having a splayed rim and ovoid base. Of medium fabric, it is devoid of any slip or wash. From a late level of Period I. Variant XXIII A has a slightly conical base. From an early level of Period I. Variant XXIII B shows grooves on the rim portion. From an unstratified deposit.

XXIV. Miniature lid of red ware with a flanged rim and a rounded base. Of thin walls, it has a rough and uneven surface. From a late level of Period I.

XXV. Fragment of a vase of pinkish red ware with an externally thickened and collared rim. Of fine fabric, it is devoid of any slip. From a very early level of Period I.

XXVI. Fragment of basin of red ware with an externally thickened and collared rim and rounded base. Of fine, fabric it is devoid of wash or slip. It has not been evenly burnt, so that patches of dark grey and red are seen. From an early level of Period I. Variant XXVI A has a pronouncedly convex body, while variant XXVI B has a straight sided bases. From a middle level of Period I.

XXVII. Convex-sided basin of dull red ware with an externally collared rim. It is distinguished by a lug-handle in the mid portion. Of medium fabric, it is devoid of any slip but has a deliberately made coarse fabric. From a middle level of Period I.

XXVIII. Fragment of a basin of dull red ware with a collared rim. It is distinguished by an unusually wide lip which has been luted to the body. Of thin walls, it is without any slip or wash. From an early level of Period I. Variant XXVIII A shows a smaller sized lip. From an early level of Period I. Lipped basins are reported from Period III of Hastinapura, but the lips are much smaller than Sravasti specimens. It is also worth noting that Sravasti specimens retain uniform width at the top and bottom but same is not the case in Hastinapura specimen.

XXIX. Dish of red ware with an incurved and sharpened rim and blunt carination at the base. Of fine fabric, it is devoid of any slip but has a smooth

surface. From a very early level of Period I. The type is also available in Black Polished Ware.

XXX. Miniature dish of red ware with a vertical and sharpened rim and a sagger base. Of a distinctive fine fabric, it is devoid of wash or slip, but has smooth surface. It is a very rare type. From an early level of Period I.

XXXI. Lid-cum-dish of dull red ware with a featureless rim and a sagger base which starts abruptly from the rim. Of medium fabric, it is devoid of slip or wash. From a middle level of Period I.

XXXII. Miniature vase having an out-turned and sharpened rim and vertical neck. Of an exceptionally fine fabric it is treated with a tan coloured slip. From a late level of Period I.

XXXIII. Fragment of a vase of red ware with an out-turned rim and multigrooved vertical neck. This is decorated with incised oblique strokes on the shoulder. Of medium fabric, it is devoid of any slip. From an unstratified deposit.

XXXIV. Miniature vase of red ware with a horizontally splayed out rim, constricted neck, multigrooved shoulder and a bulging body. Of medium fabric showing a uniform texture, it is treated with a pinkish red slip on the outside. From an early level of Period I.

XXXV. Miniature vase of dull red ware with an out-turned rim and a shouldered body which has not been evenly shaped. Of medium fabric, it is devoid of slip or wash. From an early level of Period I.

XXXVI. Fragment of a miniature vase of red ware with sides closing towards short neck. It is distinguished by a decoration consisting of incised circles around the portion below the neck. Of medium fabric, it is without any slip or wash. From a lower level of Period I.

XXXVII. Miniature vase of dull red ware with a splayed out rim. It is decorated with incised strokes around the portion below the neck. Of medium fabric, it is not evenly shaped and is indifferently fired. From a mid level of Period I.

XXXVIII. Miniature vase of dull red ware with an out-turned rim and rounded body. Of medium fabric it is devoid of any slip or wash. From an early level of Period I. Variant XXXVIII A besides being of smaller size has a sharpened rim. From a late level of Period I.

XXXIX. Miniature vase of red ware with an out-turned rim and an ellipsoidal body. Of medium fabric, it is devoid of any slip or wash. From a lower level of Period I.

XL. Vase of brownish grey ware with a sharpened rim and straight sides. Of medium fabric, it is devoid of any slip or wash and is poorly shaped. From a middle level of Period I.

XLI. Miniature vase of dull red ware with a sharpened rim and rounded body. It is entirely hand-made and has unusually thick walls. From a middle level of Period I.

XLII. Miniature vase of dull red ware having a restricted mouth, a vertical rim and a globular body. Of medium fabric, it is devoid of any slip or wash. From an early level of Period I.

XLIII. Miniature vase of dull red ware with a splayed out rim and a rounded body. Of fine fabric, it is devoid of any slip or wash. From a middle level of Period I.

XLIV. Miniature bowl of red ware with an inturned and externally collared rim. Of fine fabric, it has been treated with a thin slip which has peeled off at places. From an early level of Period I.

XLV. Miniature bowl of dull red ware with an internally bevelled rim and closing sides. It is distinguished by prominent grooves on the outside below the rim. Of thick walls and coarse fabric, it is poorly burnt. Variant XLV—A has a prominent groove on the inside portion of the rim. From a middle level of Period I.

XLVI. Miniature vase of red ware inside dark grey with a flattened rim and rounded body. Of medium fabric, it is devoid of any slip or wash. From an early level of Period I.

XLVII. Bowl of red ware with a flattened rim and rounded base. It is distinguished by a groove at the top portion. From an early level of Period I.

XLVIII. Lid-cum-bowl of grey ware with slightly drooping rim, tapering sides, flat base and prominently grooved on the inside. Of fine fabric, it is treated with greyish buff slip. From a late level of Period I.

XLIX. Lower portion of a four-footed vase with perforated bottom. Of red ware. It is unevenly burnt. From a middle level of Period I.

L. Bottom fragment of a footed vessel, possibly a dish of dull red ware. Of coarse fabric, it is treated with a light tan slip. From an unstratified deposit of Period I.

LI. Jar of dull red ware with a splayed out cut rim and a body closing in from a convex waist. Of medium fabric, it is devoid of any slip or wash but the outer surface shows a fair sprinkling of mica. From an early level of Period I.

LII. Fragment of a storage jar with a flanged rim and a weak external rib on the neck. Of medium fabric, it has been treated with a thin slip on the outside only. The pot was probably kept upside down in an open kiln so that while the entire part has burnt red, the portion of the rim placed on the ground has burnt black. From a middle level of Period I.

LIII. Fragment of a jar of red ware with an out-turned and externally collared rim and grooved shoulders. Of medium fabric, it is treated with wash on the outside only. From a very early level of Period I.

LIV. Fragment of a jar with an oval collared rim and a vertical neck. Of medium fabric, it is treated with a distinctive chocolate coloured slip and shows a polished surface. From a level of Period I.

LV. Fragment of a storage jar of dull red ware with a flattened rim and a flaring neck. Of coarse fabric, it is devoid of any slip or wash but shows a micaceous outer surface. From a middle level of Period I.

### DECORATED POTTERY.

(Pl. XII, Fig. 13)

1. Jar fragment of red ware with a splayed out rim similar to above and decorated with incised designs consisting of complex chevrons on the shoulder and simple vertical strokes around the neck. The former design appears to have been executed by a pointed fibrous material. From an early level of Period I. (No. 4).

2. Sherd of red ware having incised design comprising neatly executed chevrons around the shoulder. From a middle level of Period I. (Pl. XII 5).

3. Fragment of a shallow bowl. The flattened top of the rim bears design consisting of incised strokes. From an early level of Period I.

4. Fragment of a high necked jar having incised design of parallel oblique strokes around the neck portion. From an early level of Period I.

5. Similar to the above with the difference that strokes are slightly curved. The specimen also shows some random strokes on the body portion. From a middle level of Period I.
6. Fragment of a necked jar of dull red ware with an externally oval collared rim. It is decorated with stamped design of an irregular diamond filled up with criss-cross. From a middle level of Period I. (Pl. XII, 6 and 8).
7. Fragment of jar of red ware with clubbed rim and ribbed neck. It is decorated on the shoulder with oblique incised strokes pointed at the end. From an early level of Period I.
8. Fragment of multi-grooved high necked jar having an incised design consisting of oblique strokes below the neck. From an early level of Period I. (Pl. XII, 1).
9. Fragment of a jar of red ware decorated with incised designs as in No. 7 above with the difference that the strokes are slightly curved. From a middle level of Period I.
10. Fragment of a vase of red ware decorated with an incised zig-zag pattern. The specimen shows a perforation at the neck portion. From an upper level of Period I. (Pl. XII, 7).
11. Fragmentary sherd of a red ware vase bearing an incised design of criss—cross. From an early level of Period II (Pl. XII, 2).
12. Sherd of a red ware jar decorated with a cord pattern design in applique. From a lower level of Period I.
13. Sherd of a red ware jar decorated with a twisted cord pattern design. From an early level of Period I. (Pl. XII, 3).
14. Fragment of a jar decorated with parallel incised strokes. From a middle level of Period I.

### C. PERIOD—II.

The pottery has been studied under two groups (a) Red Ware and (b) Gery Ware.

(a) Red Ware: The red ware is mostly unslipped. In contrast to the red ware in the Period I, the variety of shapes is limited. The common shapes are (i) miniature bowls (ii) pear-shaped vessels (iii) necked vases with or without reel or basket pattern decoration (iv) Basins with nail-headed rims (v) Storage



jars. The ware bears a stamp of mass production. During the excavation operation, it was observed that often the entire mass of pottery-yield would contain nothing but fragments of the first three shapes enumerated above. This reflects a substantial departure from the style of pottery making that was noticed in the levels of Period I. Decorations were negligible. Of interest are a few fragments of vases, showing the obverse impression of probably an uninscribed cast coin with crescent-over hill symbol. (Fig. 14, no. XI)

As for the comparable shapes, miniature bowls and pear-shaped vessels are available from the post N.B.P. levels of Rajgir,—a circumstance similar to the present site. At Taxila these shapes are reported from Bhir Mound in St. II. (Mauryan) and early levels of Sirkap. At Hastinapura and Rugar, however, these together with a few other shapes occur with Northern Black Polished Ware.

(b) Grey Ware : The grey ware in this period is not dissimilar to a similar ware from Period II of Hastinapura and stratum VIII of Ahichchhatra. Usually there are two varieties e.g. fine to medium thick walls and the specimens here are of whitish grey colour, thick walls and the pots often have a dark grey colour. A thin slip of dark grey colour is generally seen but has often a tendency to rub off, Clay is usually well lavigated, but in a few cases, the fabric is definitely coarse.

The commonest shapes are dishes and though derivable from their counterparts in Period I, are different from them in detail. A limited number of specimens show a stamped decoration consisting of concentric circles, dots in a circle and wheel (*chakra*) pattern. These also occur on grey ware dishes from Period III of Hastinapura,

### (i) RED WARE.

(Fig. 14 and 15)

I. Miniature bowl of dull red ware with incurved and sharpened rim and flat base. Of thin walls, it is devoid of any slip. This is perhaps the commonest type in Period II, and it has a fairly wide distribution from the sites in Northern India. From an early level of Period II.

II. Bowl fragment of red ware with a vertical rim grooved at the top and an expanding mouth. Of medium fabric, it is devoid of any slip or wash. From a late level of Period II.

III. Fragment of a shallow bowl with a thickened rim. Of medium fabric, it is treated with a wash which is seen only in patches. Variant III A shows an impression of an uninscribed cast coin showing the crescent over-hill symbol. From an early level of Period II. Variant III B shows an impressed design of concentric circles. From an upper level of Period II.

IV. Fragment of a shallow bowl with horizontally splayed out rim and a flat base. Of medium fabric, it is treated with a brick red slip both on the outside and inside. From an early level of Period II.

V. Fragment of a bowl of dull red ware with a sharpened rim, vertical sides and rounded base. Of thin fabric, it is devoid of any slip or wash and is un-evenly shaped. From a mid level of Period II.

VI. Bowl-cum-lid of red ware with an internally beaked rim having a slight depression at the top and has a prominent groove slightly below the rim portion. The type is similar to the many specimens of this type reported from Hastinapura III. Of medium fabric, it is treated with a red wash both outside and inside. From a late level of Period II.

VII. Fragment of a bowl-cum-lid with tapering sides and flat base ; of medium fabric, it has been treated with a brownish red slip both on the outside and inside. From a mid level of Period II.

VIII. Fragment of a vase of red ware with an externally clubbed rim, of medium fabric, it has been treated with a bright red wash. From an early level of Period II.

IX. Fragment of a pear-shaped vase with a collared rim. The body starts abruptly from the rim and there is no distinguishable neck. This is a fairly common type and occurs in great profusion throughout. Of coarse fabric, it is devoid of any slip or wash and shows traces of indifferent firing. From an early level of Period II. The type is fairly wide spread and occurs from almost all the sites of Northern India, for example, from Period III of Hastinapura, stratum VIII of Ahichchhatra, stratum II of Taxila and Period IV of Rajgir. Variant IX A, shows a prominent cordon below the rim. Variant IX B is fairly popular and is of a smaller size than the arch type.

X. Fragment of a high necked jar externally thickened and grooved collared rim bearing an impressed design of reed-pattern. Of medium fabric, it is devoid of any slip or wash. The type is also reported from other sites in Northern India, From a late level of Period II.

XI. Fragment of a high necked jar with an externally collared and slightly projected rim. It is distinguished by a very neat impression of a cast-coin bearing the familiar symbol crescent over-hill. Of medium fabric, it is treated with a bright red slip. From an early level of Period II.

XII. Fragment of a high necked jar with an externally clubbed rim and has prominent rib below the rim portion on the outside, Of medium fabric, it is treated with a wash on the outside. From an early level of Period II.

XIII. Fragment of a vase with a slightly-under-cut rim and flat neck. Of medium fabric, it has been treated with a red slip on the outside only. It is distinguished by a groove in the mid portion of the neck. From an early level of Period II.

XIV. Miniature bottle-necked jar of red ware having a flat base. Of fine fabric, it has been treated with a red slip. It is a unique specimen. From an unstratified deposit of Period II.

XV. Fragment of a storage jar of dull red ware with an elliptically collared rim and a bulged body. The core shows traces of husk. Of coarse fabric, it is devoid of any slip or wash. From an upper level of Period II.

XVI. Fragment of a jar with an out-turned and externally cut rim and blugging profile. Of coarse fabric, it is devoid of any slip or wash. From an early level of Period II. Variant XVI A has a clubbed rim and a grooved exterior. From a middle level of Period II. Variant XVI B has a splayed out rim and has been treated with a red slip. From a late level of Period II.

XVII. Fragment of a basin of red ware with an incurved and externally collared rim. From an early level of Period II. Variant XVII A has an externally cut and thickened rim and is of bright red ware, treated with a wash. From an early level of Period II.

XVIII. Fragment of a handled basin of red ware with a nail headed rim. The stump of the broken loop of handle is seen below the rim portion. (Period III), From an early level of Period II.

XIX. Fragment of a lug handled basin of dull red ware with a flattened and internally projected rim. Of medium fabric, it is devoid of any slip or wash. From a middle level of Period II.

XX. Fragment of a dish or pan of dull red ware with a flattened rim and low walls, bluntly carinated to a sagger base. Of coarse fabric, it is devoid of

any slip or wash. From a middle level of Period II. Variant XX A is distinguished by a nail-headed rim and has more even texture than the arch type. From a middle level of Period II. Variant XX B shows a prominent groove below the rim and has been treated with a chocolate coloured slip. From an early level of Period II.

XXI. Fragment of a dish or pan of red ware with an internally collared and thickened rim is distinguished by a lug handle. Of coarse fabric, it is devoid of any slip or wash. Soot marks are seen on the outside indicating that the vessel was meant for cooking purposes. From an upper level of Period II. Variant XXI A is distinguished by an impressed circlet over the rim portion. From a late level of Period II. Variant XXI B has a perforated triangular lug. From a middle level of Period II.

XXII. Fragment of a basin of red ware with an externally collared rim and is distinguished by a lip. In the present case, the lip is different from the specimens in Period I, but has closer affinity with the lipped basins from Hastinapura Period III. Of medium fabric, it is treated with a wash on the outside only. From an upper level of Period II.

XXIII. Fragment of a storage jar of red ware with an externally collared rim. Of coarse fabric and thick walls, it is treated with brownish red slip. From an early level of Period II.

XXIV. Fragment of a storage jar of red ware with an internally collared and thickened rim. Of coarse fabric, it is devoid of any slip or wash and is poorly burnt. From an early level of Period I.

XXV. Fragment of a storage jar of dull red ware with a splayed out and thickened rim and an inconspicuous groove below the neck. Of coarse fabric, it has not been treated with any slip or wash and signs of being underburnt. From a middle level of Period II. Variant XXV A has an externally collared rim and has a coarse and gritty core. From an early level of Period II.

XXVI. Fragment of a carinated *handi* of red ware with a closing and sharpened rim. Of coarse fabric, it is devoid of slip or wash. From an early level of Period II. Variant XXVI A has an external oval collared rim. The inside portion has burnt grey. From an upper level of Period II.

XXVII. Fragment of a unique vase of red ware with a footed base. Of even texture, it is treated with a wash on the outside. From a lower level of Period II.

XXVIII. Fragment of a unique vase of red ware shaped like a *kamandalu*, having a boldly grooved strap-handle at the top. Of medium fabric, it has been treated with a bright red slip. It occurs in grey ware as well (see below). From a lower level of Period II.

XXIX. Fragment of a ring-stand of red ware. Of medium fabric and thick walls, it is treated with a red slip. It is a rare type. From an early level of Period II.

## (ii) GREY WARE

(Fig. 16)

1. Medium sized bowl of grey ware with a vertical and sharpened rim and flat base. Of even texture, it has not been treated with any slip and has a coarse surface. From a middle level of Period II.

2. Shallow bowl of dark grey ware with a featureless rim and a disc base. Of coarse fabric, it has not been treated with any slip or wash. From a middle level of Period II.

3. Dish-cum-bowl of grey ware with slightly incurved sides, featureless rim and a flat base. It is distinguished by a stamped design of concentric circles. From an unstratified deposit of Period II.

4. Base fragment of a dish of dark grey ware having a stamped design showing a ring of raised boss enclosing a larger one in the centre. From a middle level of Period II.

5. Base fragment of a dish of grey ware having a stamped design showing a *chakra*. Of fine fabric, it is devoid of any slip. From a middle level of Period II.

6. Dish of thick grey ware with a featureless rim and a flat base. Of medium fabric, it is devoid of any slip or wash. From a lower level of Period II.

7. Convex sided dish of thick grey ware with a featureless rim. Of medium fabric, it is devoid of any slip or wash. From a middle level of Period II.

8. Wide-mouthed dish of dark grey ware with a flattened rim. Of thick walls and medium fabric, it is treated with a wash on the outside only. From a lower level of Period II.

9. Dish of a dark grey ware with a featureless rim and high walls bluntly carinated towards the base. Of medium fabric, it is treated with a slip which

has peeled off considerably. Variant 9 a has thicker walls and a sharper carination. From a lower level of Period II.

10. Carinated *handi* of black ware with closing sides and rounded base. Of fine fabric, it is treated with a black slip over a burnished surface. It is a unique specimen and has very near affinity to the ware in the preceeding period. From a lower level of Period II.

11. Fragment of a basin of whitish grey ware with an externally collared and thickened rim. Of medium fabric, it is devoid of any slip or wash. From an upper level of Period II.

12. Fragment of a jar of grey ware with a clubbed rim and vertical neck. It is distinguished by the presence of prominent cordon below the neck. Of thick walls and uniform texture, it is treated with a wash on the outdsie only. From a lower level of Period II.

13. Fragment of a storage jar of whitish grey ware with an externally thickened and collared rim. Of thick walls and medium fabric, it is devoid of any slip or wash. From a lower level of Period II.

14. Fragment of a basin of whitish grey ware with a prominently flanged rim. Of fine fabric, it is devoid of any slip or wash. From a lower level of Period II.

15. Fragment of a *Kannandalu* shaped dark grey ware having a strap handle over the rim. Of fine fabric, it is treated with a slip on the outside only. From a lower level of Period II. The type is available in red ware as well.

16. Fragment of a basin of dark grey ware with a nail-headed rim and a grooved strap handle on the rim. Of thick walls and uniform texture it is treated with a thin slip on the outside only. From an upper level of Period II.

#### D. PERIOD—III

Pottery from Period III is mainly utilitarian in character and is devoid of decorations and is mainly unslipped.

In the uppermost levels, however, a restricted number of sherds bear insised designs. Pottery types from lower III forms a separate group and are not repeated in the upper levels. Of these, mention may be made of miniature vessels which have been found at many other sites of Northern India e.g. Ahichhatra, Hastinapura.

Fig. 17

I. Bowl of dull red ware with an externally cut rim, tapering sides, grooved on the outside. Of medium fabric, it is devoid of any slip or wash. Variant I A has thickened rim and is of a finer fabric and treated with a red slip. Variant I B has a depression below the rim and is of a smaller size. From a lower level of Period III.

II. Lid of dull red ware with an inkpot depression in the centre. Of coarse fabric, it has a rough surface. Variant II A has a rounded base, a finer texture and is treated with a bright red slip. From an early level of Period III.

III. Lid of red ware with a bowl-like depression in the centre. Of medium fabric, it is treated with a bright red slip. From a lower level of Period III.

IV. Miniature jar of red ware with an out-turned rim and a grooved exterior. Of medium fabric, it is devoid of any wash or slip. From a lower level of Period III.

V. Miniature jar of red ware with an out-turned rim and a ledge below the neck and bluntly carinated at the waist portion. Of medium fabric, it is treated with a wash. From a lower level of Period III.

VI. Miniature vase of red ware with an out-turned rim and curved mid-portion. Of fine fabric, it is treated with a red slip. From a lower level of Period III.

VII. Miniature vase of dull red ware with a splayed out and sharpened rim and rounded body which is hand made. Of fine fabric, it is devoid of a slip or wash. From a lower level of Period III.

VIII. Fragment of a basin of red ware with an externally collared rim. Of coarse fabric, it is treated with a red slip on the outside only. From a lower level of Period III.

IX. Fragment of a handled cooking vessel of dull red ware with a clubbed rim and grooved in the mid portion. Variant IX A is a loop handle of a vessel perhaps similar to the above. From a lower level of Period III.

X. Fragment of a globular vase of dull red ware with an internally cut rim and does not have a neck. It is distinguished by a rib below the rim. Of coarse fabric, it is devoid of any slip or wash. From a lower level of Period III.

XI. Fragment of a jar of red ware with a thickened and externally cut rim and bulging body. Of coarse fabric, it is devoid of any slip or wash. From a lower level of Period III.

XII. Fragment of a jar of red ware with a splayed out neck slightly projecting out at the top portion. Of coarse fabric and evenly, it is treated with a bright red slip on the outside only. Variant XII A has an arrow-headed rim. From an early level of Period III.

XIII. Fragment of a vase of red ware with a horizontally splayed out rim grooved below the neck portion on the outside. Of coarse fabric, and poorly burnt, it is treated with a bright red slip. From an early level of Period III.

XIV. Fragment of a jar of red ware with a splayed out and bluntly beaked rim and a high neck, which is grooved in the middle. Of medium fabric, it is treated with a red slip both on the outside and the inside. From a lower level of Period III.

XV. Fragment of a jar of dull red ware with a horizontally splayed out rim, closing sides and showing carination near the rounded base. This is distinguished by a groove below the neck portion. From a lower level of Period III.

XVI. Basin of red ware with drooping rim and inside depression below the rim and bluntly carinated to the base. Of medium fabric, it is treated with a wash. From an early level of Period III.

XVI. Fragment of a storage jar of red ware with an externally thickened and collared rim. Of thick walls and coarse fabric, it is devoid of any slip or wash. From a lower level of Period III.

XVIII. Fragment of a large sized basin of dull red ware with a nail-headed rim. Of thick walls and coarse fabric, it is devoid of any slip or wash. From a lower level of Period III.

XIX. Bowl of dull red ware with a flattened rim and groove on the inside portion of the body. Of medium fabric, it is devoid of slip and shows a rough surface. From a late level of Period III.

XX. Shallow bowl of red ware with sharpened rim and expanding mouth. Of medium fabric, it is devoid of any slip or wash. From a middle level of Period III.

XXII. Lid of red ware with an externally cut rim. Of medium fabric, it is devoid of any slip or wash. From an earlier level of Period III.



XXIII. Lid-cum-bowl of red ware with a splayed out and an internally cut rim, carinated at the waist portion and a rounded body. Of fine fabric it is treated with a distinctive red slip. From a late level of Period III.

XXIV. Lid-cum-bowl of red ware with closing sides, prominently grooved exterior and carinated to a rounded base. Of fine fabric, it is treated with a red slip which has peeled off considerably. From a late level of Period III.

XXV. Upper portion of a vase, perforated in the central depression. The pot must have been made in two pieces consisting of the vase proper and a perforated miniature bowl-cum-lid and joined together one above the other. Of medium fabric, it is treated with a wash. From a lower level of Period III.

XXVI. Fragment of a vase of red ware with a slightly drooping and nail-headed rim and an externally ribbed and concave neck. From a middle level of Period III. Variant XXVI A shows groups of incised dashes around the rim—top. From an early level of Period III.

XXVII. Fragment of a vase of red ware with a flanged and under-cut rim and a short neck which is bluntly carinated to the shoulder. Of fine texture it is treated with a red slip on the outside and the rim portion. From a late level of Period III.

XXVIII. Fragment of a cooking vessel of red ware with a clubbed rim, a cordon below the rim and externally grooved sides. It is distinguished by a projection at the waist portion. Of medium fabric, it is devoid of any slip or wash. From a late level of Period III.

XXIX. Fragment of a lid of dull red ware with an out-turned rim, decorated with a double row of notches. Of medium fabric, it is devoid of slip or wash, and shows signs of indifferent firing. From a middle level of Period III.

XXX. Fragment of a basin of dull red ware with curved sides and flattened rim. It is distinguished by a prominent projection on the outside below the grooves. Of thick walls and medium fabric, it is treated with a chocolate coloured slip which has considerably peeled off. From a late level of Period III.

XXXI. Fragment of a basin of red ware with a nail-headed rim and prominent external rib below the rim portion. Of thick walls and uniform texture, it has been treated with a chocolate coloured slip on the inside of rim portion. From the upper level of Period III.

XXXII. Spouted vessel of red ware with a thickened rim, short neck and a globular body. From the uppermost levels of Period III-B.

XXXIII. Spout fragment of red ware with a collar below the opening. From an early level of Period III-A.

DECORATED POTSHERDS (Pl. XIII)

1. Sherd of brownish red ware showing a row of notched triangles. From a late level of Period III.

2. Sherd of red ware showing an incised design formed by a double row of horizontal lines enclosing a zig-zag. From a late level of Period III.

3. Sherd of dull red ware showing an incised design formed by wavy lines enclosed with in row of horizontal lines. From a late level of Period III.

4. Sherd of red ware showing a series of notched inverted triangles below a row of vertical strokes, the latter enclosed within horizontal lines. From a lower level of Period III B.

5. Sherd of brownish red ware showing hatched triangles below an indeterminate pattern. From a late level of Period III.

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## CHAPTER SEVEN

### OTHER FINDS

#### A. TERRACOTTA HUMAN FIGURES

The excavation yielded a total number of thirty-three human figures. No human figures were recovered from Period I. The images recovered from Period II fall under four different types which are enumerated below :

(a) *Mother-Goddess type* : Only a solitary hand modelled specimen is available from an early pit of Period II, cut into levels of Period I. This type has a fairly wide distribution on north Indian sites. The characteristic feature of the type is an exaggerated hip-portion, adorned with an ornament and a disproportionately thin waist. At Ahichchhatra<sup>1</sup>, the type is ascribable to St. VIII (c. 300BC-200B.C.) which corresponds well with the stratigraphic position of the Sravasti specimen.

(b) *Naga Figure* : In this category, as well, there is a solitary specimen which has come from a middle level of Period II. Naga worship was a popular cult in the centuries immediately preceding the Christian era, as is evidenced by a wide distribution of Naga figures on other sites. In the earlier stages, perhaps the entire body was that of a serpent and at a later stage, the serpent and the female figure combined in one. The Sravasti specimen falls under the latter category. Kramrisch<sup>2</sup> assigns these figures to Sunga-Kushana Period (c. 100 B.C.-100 A.D.) The stratigraphic evidence from Sravasti, though pointing to a slightly earlier date, is not at variance with the date proposed by Kramrisch.

(c) *Moulded plaques of Mithunas and allied figures* : About half a dozen specimens under this category were recovered. All of these came from middle and upper levels of Period II. Exactly similar mithuna plaques were recovered from excavation at Ahichchhatra<sup>3</sup> mainly from the stratum preceding the strata which yielded *Panchala* coins. In some of these plaques an important feature is the presence of sacred symbols on the head-dress. These symbols

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<sup>1</sup> V. S. Agrawala *Op. cit.* p. 106-107.

<sup>2</sup> Stella Kramrisch, 'Indian Terracottas' *Journal of the Indian Society of Oriental Art*. VII (1939), p. 96.

<sup>3</sup> V. S. Agrawala, *Op. cit.* pp. 109-110.

have been found in plaques from Ahichchhatra and are also seen in the Kosam terracotta figure at Oxford.<sup>1</sup>

In all these mouldings, one notices the faithful transmission of contemporary sculptural idiom to the terracottas, the common man's medium of religious and artistic expression.

The limited excavation of the levels of Period III produced mostly moulded figures pressed out of a single mould and are generally confined to the lower levels of the period. A few of these are comparable to somewhat similar figures from Ahichchhatra, clasified by V. S. Agrawala under *type 22* and belonging to stratum III (C. 450-700 A.D.).<sup>2</sup> These figures are distinguished by the presence of foreign ethnic features and are believed to represent Sasanian-Persians well known during Gupta and pre-Gupta times.

#### Pl. XIV-XV

(1) Moulded plaque showing a stnding female holding perhaps a flower in her right hand and the left resting on the belly. The facial features e.g. lonzenge shaped eyes, nose and mouth have been indicated later on after the plaque has been taken out of the mould. The elaborate head-dress, among other things, consisted of a turban with central floral pattern and streamers, falling from the floral knots. The image is shown wearing a longish necklace which comes as far as the hip-portion. This and also the folds of the lower garment are different from the specimens described above. The image also lacks the soft and graceful moulding of the ones mentioned above and which are stratigraphically somewhat later than the image under consideration. From a late level of Period II. (SRV1-165)

The peculiar necklace vaguely resembles the one seen on an image from Ahichchhatra.

2. Mid-portion of a female figure. The necklace and the style of the lower garment are similar to the No. 1 but on the whole shows a much improved skill in moulding From a late level of Period II. (SRV1-79)

3. Head portiin of a female figure perhaps originally belonging to a moulded Mithuna plaque as in No. 4 below. Exactly similar and complete

<sup>1</sup> E. H. Johnston 'A terracotta figure at Oxford' *Journal of the Indian Society of Oriental Art*, X (1942), 94-102.

<sup>2</sup> V. S. Agrawala, *Op. cit.* p. 155.

specimens are available from Ahichchhatra and Kausambi. The figure is shown wearing a very elaborate head-dress consisting of a turban showing in the centre a floral pattern from which emanate on the left, two prominent rolls. The one nearer the face consisting of rosettes drops downwards vertically. The next band has a row of three sacred symbols an arrow head (*bāṇa*), a banner (*dhvaja*), and a goad (*ankusha*)—surmounting a tesselled ornament of four strings attached to a round plaque. These symbols are also found on the pair of amulet strings carved on Sanchi pillar. From an upper level of Period II (SRV1-150)

4. Lower portion of a moulded plaque depicting *Mithuna* similar to Nos. 12, 13 and 14 of Ahichchhatra. The lower dress consists of a *dhoti* with folds drawn in rolls on the side. In spite of the dress, the nudity of female figure is clearly indicated. From a middle level of Period II (SRV1-162)

5. Bust portion of a female in plaque-moulding. Of the elaborate head-dress that is mostly missing a steaking band panned with circlets and ending in a trefoil tessel is seen on the right. For the ears there are four circle ear-rings and round the neck is a torque. A very distinguishing feature of the image is the figure of the bird on the left shown pecking at the object held by the female in her left hand—From a late level of Period II (SRV1-880).

6. Hand modelled figure of a female deity (mother goddess) showing exaggerated anatomical features, hairs indicated by incised lines and ears by pierced holes. The nose and the breasts have been formed by pinching the front portion. The three horizontal lines on the exaggerated hip portion may indicate the girdle. It may be recalled that horizontal rows of circlets on the hip portion are a common feature of the mother-goddess type. From an early level of Period II (SRV1-108).

7. Lower portion of a Naga figure. It is a highly conventionalized type and the complete specimen from other sites would indicate that the upper portion was that of a serpent while the lower was that of a female. It is worth noticing how very small feet are shown supporting the weight of the body. Over the exaggerated hip-portion is seen a double line of circlets. The waist is indicated by a ciscil and the rest of the body shows incised oblique strokes. From a middle level of period II (SRV1-963).

8. Female head in relief with fan-like framing at the back, arched eye brows meeting in the middle, raised round the dot on the fore head, lenticular

eyes, pointed chin. From an early level of Period III. Similar figures are available from Ahichchhatra from Stratum III (SRV2-106).

9. Fragmentary female figure, showing an elaborate head-dress, only a portion of which is seen and consists of rich foliage as outer framing. This kind of decoration is also available on stone and terracotta figures from Mathura (SRV1-923).

10. Torso of a male worshipper with the hands shown in *anjali* pose as if offering something. From an early level of Period III (SRV2-257).

11. Seated figure of a female deity with the arms resting over the knees, prominent breasts and the navel indicated by a depression. The figure wears a crudely modelled torque. From an early level of Period III. (SRV2-283).

12. Torso of a female figure with a cylindrical body on a hollow pedestal base and shown wearing a thick torque round the neck. The moulded head was perhaps joined with the body through an attached tanon, the stump of which is seen in the top portion. From an early level of Period III. (SRV2-150).

13. Hollow female bust, head missing, From an early level of Period III (SRV2-287).

14. Female head with lenticular eyes, protruding lower lip, prominent cheek-bone meeting in a pointed chin. The figure was first taken out of a single mould and then the arched eye-brows, eye-lids etc. were indicated by incised grooves. Similar specimens have been recovered from Ahichchhatra from stratum III and illustrated under type 22, sub-type (iii) (SRV2-104).

15. Fragmentary foot of a female figure, wearing an anklet. From a lower level of Period III (SRV2-155).

#### B. TERRACOTTA ANIMAL FIGURES

The excavation yielded a total number of seventy animal figures, all of which were modelled by hand.

The specimens from Period I, though limited in number, closely recall similar figures from comparable levels of Rajgir<sup>1</sup> and Vaisali.<sup>2</sup> A characteristic feature of these terracottas is the presence of incised lines on the body. The type did not continue in the succeeding period of Sravasti.

<sup>1</sup> *Indian Archaeology*—A Review, 1953-54 p. 9; 1954-55 p. 16; 1957-58 p. 16; 1958-59 p. 13.

<sup>2</sup> *Indian Archaeology*—A Review, 1958-59 p. 12.

In Period II, the elephant figures are by far the largest in number and in many cases the body is shown with decoration. It may be noted that the elephant figures including the specimens with decoration occur commonly at early historical sites of north India, chiefly from ~~mauryan~~ levels. In view of their wide distribution and presence of decorative and often symbolic motif on the body portion, it may be assumed that the elephant was regarded in the period as an animal of some importance and an object of respect. Of the other animal figures in Period II, mention may be made of a figure of a humped animal with wings. In the Period III the figures were crudely modelled. The only exception were the figures of the horse which were often neatly done.

#### Pl. XVI and XVII

1. Body fragment of an animal, decorated with parallel incised grooves backed up by a series of chevrons, which are flanked on either side by incised lines. From an upper level of Period II. (SRV1-890).

2. Back portion of an animal possibly, a fish with the body covered with parallel and deeply incised grooves. From an upper level of Period II (SRV1-239).

3. Body portion of an animal possibly a dog with a short tail, the front legs thrown forward as if in action. The body is covered with incised lines. From a lower level of Period II (SRV1-280).

✓ 4. Head fragment of an animal with a pair of horns most likely a stag with a beaked face and eyes indicated by a hole. From a lower level of Period I (SRV1-1088).

✓ 5. Head portion of an animal with a beaked face, eyes indicated by circlets punched below the ears and the body covered with incised grooves. A transverse hole below the ears was meant for fastening the string. This and the following two specimens appear to have been burnt during or after use and show dark grey surface. From a middle level of Period I. (SRV1-678).

✓ 6. Hind portion of an animal, the body covered with incised strokes. From a middle level of Period I (SRV1-990).

✓ 7. Hind portion of a humped animal, with the dwarfish legs thrown backwards, as if in action. The body is covered with incised grooves and punched circlets. From a middle level of Period I. (SRV1-1312).

8. Head portion of a fish with the eyes and nostrils indicated by pierced holes and mouth by an incised dash. Realistically moulded. From a middle level of Period II. (SRV1-1278).

9. Elephant figure of grey terracotta with fan-like ears and lozenge—eyes. From a middle level of Period II (SRV1-114).

10. Elephant head with fan-like ears and lozenge-eyes. More realistically modelled than the specimen described above. The forehead and body are decorated with a stamped circle filled up with raised dots in the quadrants and three vertical rows of sigmas adorn the trunk portion. From a lower level of Period II. (SRV1-148).

11. Fragment of an elephant, decorated with a series of pierced holes enclosed within incised grooves. From an unstratified deposit. (SRV2-105).

12. Elephant head with a shortish forehead and a pointed trunk. It is decorated with stamped rosettes on the forehead and a tree-like design on the trunk. From a lower level of Period II. (SRV2-295).

13. Fragment of a humped bull. Details missing. From a lower level of Period III (SRV2-246).

14. Fragment of a winged and humped lion, a theriomorphic representation of a monster. The manes are indicated by incised grooves on the neck portion and so also the wings on the slightly raised spot above the hind legs. From a lower level of Period II. (SRV1-581).

15. Fragment of a figure of horse with incised lozenge-eyes and an elaborately decorated bridle shown in applique the different straps of which emanate from a central medallion bearing a stamped *chakra*. From a lower level of Period II. (SRV2-204).

16. Fragmentary head of a horse with a baked face, raised ears, circular eyes in applique, transverse hole indicating the nostrils and the bridle with its straps covered with holes, also shown in applique. The vastly different modelling in the present case as compared to the specimens Nos. 15 and 17 of the earlier period is worth noting. From a lower level of Period III (SRV2-54).

17. Head portion of a caprisioned horse with incised diamond-shaped eyes and the bridle done in applique. From a middle level of Period II. (SRV1-1574).



## C. TERRACOTTA MISCELLANEOUS OBJECTS

Under this category are included generally objects of daily use., e.g. discs, stamps, toy-cart, wheels, crucibles used in manufacture of glass, animal or bell pendent, netsinker and others.

Special attention may be drawn to a group of objects from Period I which include decorated discs bearing symbolic decorations and a large number of cylindrical sticks. It may be noted that while these objects occur in very large number in levels of Period I. They are totally absent in Period II. There are two categories of discs—the plain ones in which the decoration is around the circumference and the others in which both the sides show a representation mainly of sun, and sometimes of *Svastika*. The plain discs with decorated edges occur in large numbers in Period II of Hastinapura.<sup>1</sup> It is the latter which is of unusual interest and such discs have not been reported so far, from any other site. The symbol depicted, particularly the sun, closely recalls similar symbols on punch-marked coins.

Innumerable fragments of cylindrical sticks were recovered from levels of Period I. It is difficult to explain their purpose.

An interesting find from Period I is a large number of decorated tile fragments. No complete specimen was recovered so as to determine the size.

## Pl. XVIII-XX

1. Disc decorated with finger nail impression round the circumference on both the sides. From an early level of Period I. (SRV1-1592).

2. Disc decorated with incised indentations round the circumference on both the sides. From a middle level of Period I. (SRV1-996).

3. Disc decorated with an incised cord—pattern design round the circumference on both the sides. Similar discs are available from Hastinapura too. From an early level of Period III (SRV1-1127).

4. Disc with decorated edges and showing a central design on both the sides formed by carved incisions arranged in a radiating fashion ; in grey colour. From middle level of Period I. (SRV1-1534).

5. Disc with decorated edges and showing on both the sides an incised sun symbol with a festoon border around it. On one side, there is an additional

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<sup>1</sup> Lal, *Op. cit.*

and nearer border of connected loops. From an early level of Period I. (SRV1-912).

6. Disc with decorated edges and showing central sun symbol on both the sides. Surrounding the central design is seen a small plant like pattern. The symbol is akin to the ones noticed on the silver punch marked coins. From a middle level of Period I. (SRV1-1147).

7. Disc with decorated edges and showing on both the sides an incised design of sun with radiating rays and having festoon-like border around it. From a late level of Period I. (SRV1-406).

8. Plano-convex disc with decorated edges and showing a central sun-symbol with a double row of festoons surving as border. From an early level of Period I. (SRV1-1481).

9. Disc with an incised *Svastika* on one side and sun symbol on the other, grey colour. From an unstratified deposit. (SRV1-1711).

10. Fragment of a spherical object with a flattened top and decorated with incised criss-cross pattern. From an early level of Period I. (SRV1-1282).

11. Plano-convex disc showing a wheel-like design with spokes, ends of which are pierced. From a late level of Period II (SRV1-116).

12. Potter's dabber, upper portion missing. From an upper level of Period I. (SRV2-288).

13. Potter's dabber, From an upper level of Period III. (SRV1-1387).

14. Spindle whorl (?) conical. From an upper level of Period III. (SRV2-30).

15. Potter's stamp for impressing a lattice design. From an early level of Period II. (SRV2-289).

16. Pestle with triangular notches for grinding. From a lower level of Period II (SRV2-208).

17. Fragment of a tile showing a moulded surface, decorated with raised and encircled dots; the under side is plain. No complete specimen was recovered. From a late level of period I (SRV1-941).

18. Same as above, but showing larger impression. From an unstratified deposit. (SRV1-151).

19. Same as above, glass threads are seen sticking in the depression. From middle level of Period I. (SRVZ-687).

20. Fragment of a plain cylindrical disc. No complete specimen was found so as to determine the size. From late level of Period I (SRV1-1302).
21. Axe-like object with sharp edge, a flattened top and triangular in section. From a late level of Period II. (SRV2-92).
22. Wheel. From an early level of Period II (SRV1-1155).
23. Wheel of toy cart. From a middle level of Period II (SRV1-926).
24. Rituatistic object showing beaked projections on either side. From a late level of Period II (SRV2-201).
25. Semicircular and indeterminate object with three compartments and rows of triangular notches round the faceted circumference, and showing a transverse hole. Similar objects have been found at Taxila and described as skin-rubbers. From an early level of Period I. (SRV1-1473).
26. Pottery disc with double perforation. From a middle level of Period I. (SRV1-1039).
27. Crucible with a pointed end. From an upper level of Period I (SRV1-74).
28. Miniature vase either used as a lid, or children's plaything. From an early level of Period III (SRV1-378).
29. Net-sinker. From a late level of Period III. (SRV2-160).
30. Perforated cone perhaps meant to be used as bell or animal pendant. From an early level of Period III (SEV2-205).
31. Bell pendant shaped like a conch. From a late level of Period III. (SRV2-136).
32. Bell-pendant with a curved end. From an early level of Period II. (SRV2-230).

#### D. BEADS

The excavation yielded a total number of 169 beads including eighty-five of terracotta. Of the rest, glass accounts for twenty-two beads which number includes seven of stratified glass showing colour combinations. The glass beads were evenly distributed in both the periods. Of the semi-precious stones, carnelian and agate were most popular accounting for 19 and 11 beads respectively. Banded agate was commonly employed in both the Periods I and II and often the raw stone was skillfully cut so that the bands got arranged

variously as chevrons, 'eyes' and zones. Crystal and amethyst were the material for nine and three beads respectively and these came mostly from Period II. Crystal beads were absent in Period I and it is interesting to note that at Taxila<sup>1</sup> the crystal beads are not reported from early Mauryans or Pre-Mauryan levels. At Hastinapura<sup>2</sup> they were confined to the levels of Period III only. Crystal beads were made out of transparent quartz which was subjected to a rather intricate process of glazing. Jasper and lapis-lazuli were the other semi-precious stones used for making beads, with three and one specimens respectively. Copper, bone and shell were also variously employed for making beads, during periods I, II and III.

The most interesting specimens are three exquisite eye-beads' of stratified glass, two of which were recovered from the lowermost levels of Period I and the third was a surface find. This type of beads is not reported from other sites in northern India except Taxila<sup>3</sup> (Bhir-Mound) where occurrence of identical specimens is recorded.

The suggested date for Taxila specimens on the basis of findspot is between 6th.-3rd century B.C. but Beck would prefer the earlier limit on grounds of their supposed affinity with beads found on Mediterranean sites. According to him these beads were either actually made in Mediterranean region and imported in India or were made by craftsman who came from that area. If this assumption is correct, it must be true of Sravasti specimens as well. It has to be admitted that Taxila and Sravasti specimens have come to us in a highly finished stage indicating the perfect, though complicated technique of manufacture and in view of the reportedly rare occurrence of the specimens on the Indian sites, it is difficult to controvert Beck's assumption regarding their possible origin. There is another class of 'eye' beads found at Sravasti and they are of banded agate wherein the stone was cut in a manner that the natural bands formed themselves into 'eyes'. This type is also not common on Indian sites but is reported from early Mauryan and pre-Mauryan levels of Bhir Mound, Taxila. There is a good number of rare non-geometric shapes mainly from Period I, e.g. leech-bead of agate, axe-amulet of carnelian, and dagger pendants of carnelian and shell. Identical specimens are available from Taxila from comparable levels. A cylinder bead of lapis-lazuli from lower levels of Period

<sup>1</sup> H. C. Beck, *Op. cit.* pp. 11-13

<sup>2</sup> B. B. Lal, *op. cit.* p. 92.

<sup>3</sup> H. C. Beck, *Op. cit.* pp. 23-24 Pl. I Nos. 13-18

I is of considerable interest as the stone is not available in India and either the raw-material or the finished product itself must have been imported. A near identical specimen is available from pre-Mauryan levels of Bhir-mound, Taxila.

In the entire collection, there is a solitary etched specimen in stone and. This is an unfinished zone bead of agate from an early level of Period II and similar to the one found at Taxila.

Of the faceted beads, mention may be made of double pentagon of crystal, a specimen of exquisite workmanship and was recovered from the deposits of Period II. It is of interest of note that the type has a fairly wide distribution and occurs at Sirkap<sup>1</sup> (Taxila), Period III levels of Hastinapura,<sup>2</sup> Stratum VIII-VII of Ahichchhatra.<sup>3</sup> An elliptical amethyst bead from Period II is worth noting. Roughly similar specimens have been reported from many north Indian sites e.g. Taxila, Sirkap, Hastinapura and Ahichchhatra.

Of the many glass beads, an interesting example is a spiral bead of stratified glass from Period II wherein a thread of white glass was wound round the black. This type also is available from the sites mentioned above. Mention also may be made of vase beads of opaque glass from Period I.

The areca nut or vase shaped beads of terracotta were found in large numbers from Period I. These beads occur at many sites in Northern India, mainly from Mauryan and Pre-Mauryan levels. An interesting variety in terracotta is a moulded cylinder bead showing an impressed design formed by double row of chevrons and is ascribable to Period II.

#### Pl. XXI—XXII Fig. 18-19

1. Agate: Leech-shaped, flattened: unstratified (SRVI-1608)
2. Agate: Leech-shaped, flattened, broken from the middle; from an early level of Period I. (SRVI-987)
3. Agate: Etched zone, long, barrel, circular, unfinished; From an early level of Period II (SRV1-516)
4. Agate: Long barrel circular, fragmentary: From an early level of Period I (SRV1-761)

<sup>1</sup> H. C. Beck, *Ibid*, Pl. V, 19.

<sup>2</sup> Lal, *Op. cit.* p. 92.

<sup>3</sup> M. G. Dikshit, 'Beads from Ahichchhatra (U.P.)' *Ancient India* No. 8 p. 45.

5. Agate: Long, banded elliptical; From an early level of Period II. (SRV1-1236)
6. Agate: Spherical. From a middle level of Period III (SRV2-85)
7. Agate: Standard truncated bicone circular, From an upper level of Period I (SRV1-611)
8. Agate: Long, banded, heagonal. Unstratified (SRV1-1609).
9. Agate: Eye-bead, short, oblate. From an early level of Period I (SRV1-1556)
10. Agate: Eye-bead, convex bicone. From a middle level of Period II (SRV1-142)
11. Glass (Stratified): 'Eye' bead, showing seven 'eyes'; unstratified (SRV1-1610)
12. Glass (Stratified): 'Eye' bead showing eight 'eyes'. From an early level of Period I (SRV1-1469)
13. Glass (Stratified) 'Eye' bead, showing three 'eyes'. From an early level of Period I (SRV1-756)
14. Amethyst: Short flattened barrel hexagonal; From an upper level of Period II (SRV1-40)
15. Amethyst: Elliptical hexagonal. From a lower level of Period I (SRV1-1247)
16. Amethyst: Toggle-bead, unstratified. (SRV1-1382)
17. Quartz: Long barrel circular; incompletely bored. From an early level of Period II (SRV1-395)
18. Lapis-Lazuli: Long cylinder pentagon. From an early level of Period I (SRV1-588)
19. Carnelian: Long banded hexagonal. From a late level of Period of III (SRV2-62)
20. Carnelian: standard banded, septagon. From a late level of Period III (SRV2-163)
21. Carnelian: Spherical: From an early level of Period II (SRV1-447)
22. Carnelian: Spacer, crescent-shaped; double perforation; From an early level of Period II (SRV1-1500)

23. Carnelian : Amulet shaped like an axe. From an early level of Period I. (SRV1-1464)
24. Carnelian : Dagger-Pendant. From an early level of Period II (SRV1-267)
25. Carnelian : Long bicone, octagonal. From a late level of Period III (SRV2-68)
26. Carnelian : Long barrel flattened hexagonal ; fragmentary and unfinished : From an early level of Period I (SRV1-1341)
27. Carnelian : Long cylinder square ; broken ; From a late level of Period I. (SRV1-1215)
28. Carnelian : Long cylinder square unfinished : From a late level of Period I. (SRV1-1215)
29. Carnelian : Standard barrel circular : From a middle level of Period I (SRV1-1436)
30. Carnelian : Long cylinder irregular square ; From a late level of Period I (SRV1-1381)
31. Carnelian : standard bicone hexagon : From an early level of Period II (SRV1-1138)
32. Carnelian : Standard truncated bicone square ; From a late level of Period III (SRV2-60)
33. Crystal : faceted double pentagon twisted. From a late level of Period II (SRV2-105)
34. Crystal : Short truncated bicone hexagon ; unstratified. (SRV1-158)
35. Crystal : standard barrel hexagon ; unstratified. (SRV1-451)
36. Crystal : Spherical. From an early level of Period II (SRV1-1047)
37. Crystal : Long barrel circular ; unstratified. (SRV1-445)
38. Jasper : Truncated bicone chamfered at the perforated ends, circular. From an early level of Period I (SRV1-601)
39. Limestone : standard barrel circular ; From a late level of Period II (SRV2-166)
40. Glass : spherical. From a middle level of Period II (SRV2-134)

41. Glass: Spiral, white over black glass; From a middle level of Period II (SRV1-396)
42. Glass: (Blue) standard barrel circular; From a lower level of Period II (SRV1-341)
43. Glass (Light Green): Standard irregular bicone diamond; From an early level of Period I. (SRV1-767)
44. Glass (Greenish white opaque): Vase-shaped. From an early level of Period I. (SRV1-643)
45. Glass (Black): Standard barrel circular; Depression at the perforated ends. From an upper level of Period III (SRV2-93)
46. Glass (Black): Short convex bicone circular. From a late level of Period III. (SRV2-94)
47. Shell: Disc, cylinder, square, showing four punched circlets on one side. From an early level of Period II (SRV1-388)
48. Claw: Dagger-pendant, curved. From an early level of Period I (SRV1-1466)
49. Shell: Dagger-pendant; From a late level of Period I (SRV1-1384)
50. Shell: Long barrel Hexagon. From a late level of Period I (SRV1-1160)
51. Copper: Standard barrel circular. From an early level of Period I (SRV1-685)
52. Copper: Long cylinder circular. From an early level of Period I (SRV1-835)
53. Copper: Standard cylinder square. From a middle level of Period II. (SRV2-118)
54. Bone: Spherical. From a middle level of Period II (SRV1-143)
55. Bone: Standard bicone circular lug-collared. From a middle level of Period II. (SRV1-26)
56. Terracotta: Cylinder circular lug-collared. From an unstratified deposit.
57. Terracotta: Pea-shaped, smooth upper surface. From an early level of Period III (SRV2-156) [No. 58 of Pl. XXII]
58. Terracotta: Vase-shaped. From a middle level of Period II (SRV-190) [No. 59 of Pl. XXII]



59. Terracotta : Vase-shaped, rounded base. From a level of Period (SRV2-309) [No. 60 of Pl. XXII]

60. Terracotta : Vase-shaped. From a late level of Period I. (SRV1-1408) [No. of 61 Pl. XXII]

61. Terracotta : Long Cylinder oblate ; showing stamped design consisting of a double row of chevrons. From a middle level of Period II (SRV1-588) [No. 57 of Pl. XXII]

62. Terracotta : Shaped Like a vase having a constricted neck. From an early level of period II. (SRV1-1598)

### E. METAL OBJECTS

(i) *Copper* : The excavation yielded one hundred and twenty four copper objects and these were distributed in all the three periods. A majority of these, however, consisted of shapeless bits. As for the evidence from the limited excavation goes, copper does not appear to have been employed for making weapons, but for fashioning articles mainly of toilet and ornaments. These include bangles, ear-ornaments, antimony rods, nail parers, bell-pendants, borers, needles. The nail-parer and the borer from Period I deserve special notice as roughly similar objects have been reported from Period III of Hastinapura<sup>1</sup>. An ear-ring from Period I made of twisted wire is a piece of exquisite workmanship. A similar specimen but with a greater diameter is reported from the Mauryan levels of Taxila<sup>2</sup> (Bhir-mound). A unique and interesting find from a middle level of Period II is a bangle with an interlaced knot, Bangles with interlaced knots occur in the Parthian levels of Taxila<sup>3</sup>.

### Fig. 20

1. Antimony rod, round section. From an early level of Period I. (SRV1-461)

2. Pin with one of the ends thickened. From a lower level of Period II (SRV1-119)

3. Needle. From a lower level of Period I (SRV1-1067)

4. Pin, possibly a needle with one of the ends flattened. From a lower level of Period I (SRV1-957)

<sup>1</sup> Lal, Op. cit. p. 95.

<sup>2</sup> Sir John Marshall, Taxila II pp. 575

<sup>3</sup> *Ibid*

5. Drop pendent of conical shape. From a middle level of Period I (SRV1-1393)

6. Drop-pendant, with a small opening below and a ball inside, unstratified (SRV2-180)

7. Brooch, thin and oblong in section. From an upper level of Period II (SRV1-1049)

8. Nail-parer, flattened at the working end. From a lower level of Period I (SRV1-888)

9. Borer, the upper portion decorated with a twisted cord-like design. The working end has a circular point while the other has a square section, the top shows a grooved cross. From a middle level of Period I. (SRV1-1447)

10. Ear-ring, with open knobbed ends. The wire has been twisted cable-wise. From a middle level of Period I (SRV1-903)

11. Bangle of thin wire, oblong in section. From a middle level of Period I (SRV1-1406)

12. Bangle, flat in section and an inter-locked knot. From a middle level of Period II (SRV1-1288)

13. Bangle, round in section. From a middle level of Period II (SRV1-901)

(ii) *Iron*: The excavation yielded a total number of 156 iron objects including many shapeless fragmentary lumps and also slags of iron, distributed in all the three periods of the excavation. It may, however, be stated that this metal was comparatively scarce in Period I and most of the objects were recovered from the upper levels. This phenomenon may not be of much consequence in view of the limited area of excavation.

As can be deduced from the various objects unearthed, iron appears to have been chiefly used for making weapons and implements in all the Periods. An elephant goad from upper levels of Period I is an interesting find. Roughly similar specimens have been earlier reported from the early Mauryan levels of Taxila<sup>1</sup>.

Fig. 21

1. Knife-blade with a single cutting edge and a sharpened upper end with a tang for the handle from an early level of Period II (SRV1-1101)

<sup>1</sup> *Ibid*

2. Knife-blade with straight back and slightly tapering cutting edge. From a lower level of Period III, possibly not in its true context. (SRV2-220)
3. Leaf-shaped spear-head. From an early level of Period II (SRV1-455)
4. Leaf-shaped spear head. From a middle level of Period III (SRV2-103)
5. Knife-blade, parallel-sided. From a middle level of Period II (SRV1-1497)
6. Nail-From an early level of Period II (SRV2-314)
7. Nail, square section. From an unstratified deposit (SRV1-982)
8. Nail, oblong section. From an upper level of Period I (SRV1-988)
9. Nail with round section. From an upper level of Period II (SRV1-92)
10. Arrowhead with a long tang and a circular point. From an upper level of Period III (SRV2-59)
11. Arrowhead with a median ridge on both the sides. From an upper level of Period II (SRV-970)
12. Arrowhead with an oblong section in the middle portion and a tang. From an upper level of Period I (SRV1-1368)
13. Chisel, square section and having slightly splayed cutting edge. From a lower level of Period II (SRV2-293)
14. Floox with splayed end. From an upper level of Period II (SRV1-371)
15. Chisel with a crescentic cutting edge and a curve at the other end for being inserted in the handle. From an upper level of Period III.
16. Elephant goad (*ankush*). The projection in the side is the broken stump of the curved hook. From an unstratified deposit of Period I ((SRV1-774)
17. Clamp for joining two members of masonry. From an upper level of Period III (SRV2-12)
18. Socket fragment possibly belonging to a spade. From an upper level of Period II (SRV2-98)

## F. BONE AND IVORY OBJECTS

The excavation yielded an unusually large number of bone and ivory arrowheads from both Periods I and II. These can be classified under four types. All the types have been previously reported from Taxila<sup>1</sup>.

*Type (a)* Under this type are included the specimens having sharp circular points at one end and a hollow socket hole for shaft-tanon at the other. The specimens are mostly of ivory and the type is confined to Period I alone.

*Type (b)* In this category the point is similar as in (a) but in addition has a well defined tang. Specimens both of ivory and bone have been recovered. The arrowheads under this group have a polished surface and generally show a neat workmanship. This type is also confined to Period I. Roughly similar specimens have been recovered from Period II of Hastinapura<sup>2</sup>.

*Type (c)* The type comprises of specimens sharpened at both ends. The arrowheads herein are unevenly shaped. The mid portion has a flat or circular section. Specimens made of ivory are seldom met with in this category. The numerical proportion of this type is far greater than all others and arrowheads were generally found in clustexs of hundreds in certain areas and at particular levels. This type of arrowheads is generally confined to the lower levels of Period II.

*Type (d)* Under this type are included arrowheads with the trilateral points and a tang. In the Taxila specimens, the tang shows a hollow, socket which is absent in Sravasti arrowheads. Trilateral pointed arrows are extremely restricted in number and were recovered from upper levels of Period II.

Of the other miscellaneous object, mention may be made of a drop pendant from a lower level of Period I with a sharp point and looks very much like a plumb-bob. Equally interesting is a decorated hair pin from Period II. Almost identical specimens were recovered from early levels of Sirkap<sup>3</sup> (Taxila).

## Pl. XXIII—XXIV

*Type (a)*

1. Bone: Arrowhead, sides tapering to a fine circular point and a socket-hole behind for shaft-tanon. From a middle level of Period I. (SRV1-967)

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<sup>1</sup> *Ibid*

<sup>2</sup> Lal, *op. cit.* p. 105

<sup>3</sup> Marshall, *op. cit.* p. 664

2. Ivory : Similar to the above but showing a polished surface. From a middle level of Period II (SRV1-630)

3. Bone : Arrowhead of a smaller size and a wider lower end, otherwise variety similar to the above. It is a rare variety. From a late level of Period I. (SRV1-1350)

*Type (b)*

4. Bone : Arrowhead with a well-defined tang, a sharp point and has a polished surface. From a lower level of Period I (SRV1-704)

5. Ivory : Similar to the above but of a longer size. From a lower level of Period I (SRV2-921)

6. Bone : Arrowhead with a less defined tang and not very evenly shaped. From a lower level of Period I. (SRV1-933)

*Type (c)*

7. Bone : Arrowhead sharpened at both ends and roughly shaped. From a lower level of Period II. (SRV1-292)

8. Bone : Arrowhead, sharpened at both the ends, unevenly shaped and having a flat section in the middle portion, From a lower level of Period II (SRV2-1185)

*Type (d)*

9. Bone : Arrowhead with a trilateral point and a tang. From an upper level of Period II (SRV1-31)

*Other Objects :*

10. Bone : Hair-Pin with an ornate decorated upper end. From an early level of Period II (SRV1-1229)

11. Bone : Flesh-rubber. From an early level of Period II. (SRV1-1441)

12. Bone : Flesh-rubber. From an early level of Period I. (SRV1-1385)

13. Bone : Indeterminate boat-shaped object with a transverse perforation. It looks very much like a goldsmith's hammer and might have been used as a such. The perforation was in that case for receiving the tanon of the wooden handle. From a lower level of Period II (SRV1-457)

14. Bone: Fragment of a reel. From an upper level of Period II (SRV1-84)

15. Bone: Drop pendant with a sharpened lower end. The specimen closely recalls the plumb-bob. From an early level of Period II. (SRV2-35)

16. Bone: Fragment of a dice. From an upper level of Period III (SRV2-140)

17. Bone: Disc. From an early level of Period II (SRV2-35)

#### G. INSCRIBED MATERIAL

##### Pl. XXVI A

1. A sealing of baked clay reading; *baladata* (Sa). The letters do not show any marked development from Mauryan characters and can be assigned to late 3rd. Cent. B.C. to early 2nd. Cent. B.C. but could not have been struck later than 150 B.C. at the most. From a middle level of Period II (SRV2-241)

#### H. BANGLES AND RINGS

The excavations yielded bangles made of glass, agate and terracotta from the different periods. Apart from these there were a few copper bangles, mainly from Period I which have been described else where.

Glass bangles were recovered in very large numbers from Period I and they are mainly of sea-blue and light green glass, and include occasional specimens with thick section which must have been used as brackets. Bangles made of terracotta and agate were generally recovered from the level of Period II. Agate bracelets have been earlier reported from Hastinapura III<sup>1</sup>. Some of the specimens in terracotta bear stamped patterns. Bangles of stratified glass and showing studs were commonly available from upper levels of Period III.

##### Pl. XXV

1. Bangle of (sea-blue) glass with a plano-convex section. From a middle level of Period I. SRV1-1475)

2. Bangle of black glass with a concave outer side, flat in section. From an upper level of Period II (SRV1-228)

3. Bangles of (sky-blue) glass unevenly shaped. From an upper level of Period III (SRV2-51)

<sup>1</sup> Lal, *op. cit.* pp. 90-91 Pl. LIII, 16.

4. Bangle of (light-green) glass plano-convex in section and showing patches of a white coating. From a middle level of Period I. (SRV1-1055)
5. Thick bracelet of (black) glass triangular in section and shows patches of white coating which come off easily by rubbing. From an early level of Period I (SRV1-1076). This shape is available in green glass as well.
6. Bangle of stratified glass, maroon over light green and having studs around the circumference. From an upper level of Period III (SRV2-41)
7. Bracelet of light green glass triangular in section (SRV1-523)
8. Bangle of terracotta, triangular in section. From an upper level of Period II (SRV2-207)
9. Bangle of terracotta, flat in section. From a middle level of Period II. (SRV2-269)
10. Bangle of terracotta, circular in section with a design impressed round the circumference. From a middle level of Period II (SRV2-300)
11. Bangle of Agate, plano-convex in section. From a lower level of Period II (SRV1-1503)
12. Ring of green jasper. From an upper level of Period III. (SRV2-96)
13. Ring of flattened copper wire. From a lower level of Period II. (SRV2-173)

#### J. STONE OBJECTS

Miscellaneous objects of stone were not many. Pestles made, chiefly, of sandstone were recovered in large numbers. Some of these still retain their fine lustrous surface and are assignable to lower levels of Period II. Of some interest are a few discs of banded agate limited in number. Similar objects have been found at Taxila<sup>1</sup> from Mauryan levels.

#### Pl. XXVI-XXVII

1. Marble: Miniature bowl with a prominent groove on the rim presumably for receiving the lid. From an early level of Period III (SRV2-212)
2. Slate: Fragment of a shrpener and indicated by the pronounced concavity in one of the sides. From a lower level of Period II (SRV1-1084)
3. Soap-stone: Mould, having two incised circles. From an upper level of Period II (SRV1-300)

<sup>1</sup> Marshall, *op. cit.*

4. Agate: Disc. showing natural bands, it was used as in lay piece. From an upper level of Period II (SRV1-75)

5. Agate: Similar to above but showing parallel bands. From an early level of Period II (SRV1-1000)

6. Sandstone: Pestle showing a polished surface. From an early level of Period II (SRV2P. 7)

7. Sand-stone: pestle. From an early level of Period II. (SRV2-P. 9).

### K. COINS<sup>1</sup>

In all twenty-four coins were found in course of excavations. With the exception of one coin which was picked up from the surface the rest were obtained from regular excavated layers. Of these, one came from Period III, and others from Period II. Period I did not yield any coin.

Majority of the coins are in a poor state of preservation, often fragmentary in shape, with legends and symbols worn. The metal used is invariably copper.

The coins recovered from Period II are assignable to all the three sub-periods to which it has been divided on the basis of stratigraphic evidence. Phase one (i.e. lower) consisted of the recognisable ones, several uninscribed cast copper coins. The cast copper coins can not be accurately dated but the period of their origin is usually assigned to the third century B.C.<sup>2</sup> The nature of other finds does not militate against this date for the Period II, phase one.

The middle phase of Sravasti II, yielded apart from cast copper ones, one copper, rectangular, punchmarked coin. The symbols are mostly blurred and as such it cannot be associated with any known group. It, however, appears likely, that the coin was prepared from a cast, and from the stylistic point of view may be given an upper date in the usual period of prevalence of this type of monetary issues, say second century B.C.

Phase three, i.e. upper layers of Period II, yielded apart from a few copper coins, mostly fragmentary and blurred, but in all probability cast copper coins, an unique square copper coin having close affinity with the local coins of Ayodhya.

<sup>1</sup>This Section has been kindly contributed by my former Colleague in the Archaeological Survey of India, Dr. S. C. Ray, presently Superintending Archaeologist Temple—Survey, Bhopal.

<sup>2</sup>John Allan; *Catalogue of the Coins of Ancient India*, London, 1936. p. lxxvii, S. C. Ray, *Stratigraphic evidence of coins in Indian excavations and some allied issues*, Banaras, 1959, p. 3.



The ceremonial standard (in fact, *anṛuṣa*) on the obverse of the coin is an improvement over the earlier and simpler type of standards seen on the coins belonging to an earlier dynasty, usually given a date not earlier than 2nd Century B.C. while the reverse is closely similar to the types of Kumudasena, a *rājā* (as he uses this title on his coins) of a later dynasty. It will not be unreasonable therefore to suggest for this coin a date round about first century B.C.


Only one coin, uninscribed cast copper, was noticed in Period III. Seemingly, it was a survival from previous period.

A Pañcāla Mitra type of coin was picked up from the surface. The name of the king cannot be read, due to deteriorated condition of the specimen. Possibly Period II was the proper stratigraphic context for this coin, usually assigned to third-second century B.C.

The coins are described below. Weights are recorded in grammes and milligrammes and the size in inches.

- No. 1. Round copper coin, blurred.  
Size 6" ; Weight 1.9  
Period II (lower).
- No. 2. Square, copper, blurred.  
Size .6" × .5" ; Weight 0.804  
Period II (lower).
- No. 3. Round copper coin, of thick fabric, fragmentary, wholly blurred.  
Size .8" : Weight 3.200  
Period II (upper).
- No. 4. Copper piece, possibly coin, totally blurred.  
Size .6" ; Weight 1.00  
Period II (lower).
- No. 5. Broken half of a thin round copper coin, blurred.  
Size .8½" in length ; Weight 1.84  
Period II (upper).
- No. 6. A piece of thin fragmentary copper sheet ; may not be a coin.  
Weight 1.308  
Period II (lower).
- No. 7. Copper, fragmentary.  
Period II (lower).

- No. 8. Fragmentary copper coin ; rectangular or square ; traces of symbols, too poor to be clearly recognised.  
Size .6"×.4" ; Weight 0.363  
Period II (middle).
- No. 9. Fragmentary, copper, blurred.  
Size .6"×.5" ; Weight 0.335  
Period II (middle).
- No. 10. Copper, round—

Obv.  with an inscription below .....pā.....

Rev. Illegible.

Size .7½" ; weight 3.885

Unstratified Plate Fig. 1.

(This is a Pañcāla Mitra coin—may be dated to C. 200 B.C.)

- No. 11. Square, cast copper, fragmentary.  
Obv. Tree in railing, indistinct traces of other symbols.  
Rev. Taurine, indistinct traces of other symbols.  
Size .6"×.4½" ; Weight 0.360  
Period II (lower). Plate XXVIII Fig. 6.  
(Can be dated in between 3rd to 1st Cent. B.C.)
- No. 12. Copper, cast, square or rectangular.  
Obv/ Elephant 1., below, left, Svastika.  
Rev. Tree in railing ; traces of other symbols.  
Size .5"×.3½" ; Weight 0.388  
Period II (lower). Plate XXVIII no. 7.
- No. 13. Ref. No. 129.

Square—Cast copper.

Obv. (i) Six armed symbol

(ii) Tree in railing

(iii) Traces of an uncertain symbol.


Rev. Traces of a symbol, cannot be properly identified due to debased condition.

Size .6"×.5" ; Weight 0.780

Period III (lower). Plate XXVIII no. 4.

(Date uncertain but may belong originally to a period, C. 3rd. 2nd Century B.C. when cast copper coins were in actual circulation.)

No. 14. Copper, rectangular.

Obv.  an animal, probably horse, 1.

Rev. Taurine symbols, faint traces of other symbols.

Size .7" × .5"; Weight 1.35

Period II (lower). Plate XXVIII no. 5.

No. 15. (Square copper).

Obv. Elephant r. with a couch on its back, a decorative ankuśa on the left, wavy lines above, faint traces of inscription below.

Rev. An elaborate *nandipāda triśūla* symbol; traces of symbols on four corners of which, Svastika r. below, is recognisable.

Size .9"; Weight 5.280

Period II (upper). Plate, XXVIII no. 2.

(Has close affinity with Ayodhya coins. Can be tentatively assigned to the 1st Century B.C.)

No. 16. Copper, square, fragmentary, traces of symbols on either side, completely blurred.

Size .7" × .6"; Weight 1.872

Period II (middle).

No. 17. Fragmentary, square or rectangular, cast copper coin.

Obv. Traces of a symbol, flower.

Rev. Wholly blurred.

Size .6" (length); Weight 0.737.

Period II (lower).

No. 18. Square copper coin—wholly blurred.

Size .8" × .7"; weight 5.380

Period II (upper).

No. 19. Copper, round, blurred.

Size .8"; Weight 3.995

Period II (upper).

No. 20. Fragment of a rectangular copper coin. Blurred.

Weight 0.320

Period II (upper).

No. 21. Copper, rectangular.

Obv. An animal, 1.

Rev. Taxila Symbol, traces of other symbols.

Size  $.6\frac{1}{2}" \times .5"$  ; Weight 0.560

Period II (middle).

No. 22. Copper, rectangular, punchmarked.

Obv. Six armed symbol with arrowhead and circles alternating, faint traces, possibly of a tree symbol, and traces of other symbols, unidentifiable.

Rev. Faint traces of impression, illegible.

Size  $.7" \times .5\frac{1}{2}"$  ; Weight 1.420

Period II (middle). Plate, Fig. 3.

No. 23. Round, copper, illegible.

Size  $.4\frac{1}{2}"$  ; Weight 0.82

Period II (lower).

No. 24. A fragmentary copper coin. Wholly blurred.

Weight 0.87.

Period II (lower).

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## LINE-DRAWINGS

- Fig. 1 : Site-plan of Sravasti (after Vogel)  
Fig. 2 : Section across Defences (SRV-1)  
Fig. 3 : Section-Habitation Area (SRV-1)  
Fig. 4 : Plan-Habitation Area (SRV-2)  
Fig. 5 : N.B.P. Ware types, Period I  
Fig. 6 : A. Black Polished Ware types, Period I  
          B. Black and Red Ware types, Period I  
Fig. 7 : Painted pottery, Period I  
Fig. 8 : Plain Red ware types, Period I  
Fig. 9 :         "         "         "  
Fig. 10 :        "        "        "  
Fig. 11 :        "        "        "  
Fig. 12 :        "        "        "  
Fig. 13 : Decorated Ware, Period I  
Fig. 14 : Plain Red Ware, Period II  
Fig. 15 :        "        "        "  
Fig. 16 : Grey Ware, Period II  
Fig. 17 : Plain Red Ware, Period III  
Fig. 18 : Beads from excavations  
Fig. 19 i        "        "        "  
Fig. 20 i   Copper objects  
Fig. 21 : Iron objects.
-

## PHOTOGRAPHIC PLATES

- Pl. I : Panoramic view of the site, with the area of excavation (SRV-1) in the foreground and the river Rapti in the distant background.
- Pl. II : A view of the city-wall from outside, showing the bastion towers at the western gateway.
- Pl. III : A view of the burnt brick fortification walls, SRV-1.
- Pl. IV : A brick wall with a socket in the masonry for a wooden post, Period II, SRV-2.
- Pl. V : A close-up view of brick fortification walls, Period II.
- Pl. VI : A view of the excavated trench (SRV-1) from the northern side, showing A—Period I deposit, B—Mud rampart, Phase I, C—Brick-fortification wall, Phase II, D—Mud-rampart, Phase III, E—Brick fortification wall, Phase IV.
- Pl. VII : A view of the excavated trench from southern side, SRV-1.
- Pl. VIII : A close-up view of the Ring-well, Period II, SRV-1.
- Pl. IX : A view of the excavated trench (SRV-2), showing sequence of deposits in Periods II and III.
- Pl. X : Structures of Period III, SRV-2.
- Pl. XI : *Graffiti* mark on NBP Ware, Period I.
- Pl. XII : Decorated pottery, Period I.
- Pl. XIII : Incised pottery, Period III.
- Pl. XIV : Terracotta Human Figures.
- Pl. XV :       "       "       "
- Pl. XVI : Terracotta Animal Figures
- Pl. XVII :       "       "       "
- Pl. XVIII : Terracotta Discs.
- Pl. XIX : Terracotta Miscellaneous objects.
- Pl. XX :       "       "       "
- Pl. XXI : Beads.
- Pl. XXII :       "
- Pl. XXIII : Bone and Ivory arrowheads and pins.
- Pl. XXIV : Bone objects.
- Pl. XXV : Bangles and Rings.
- Pl. XXVI : A. : Inscribed sealing.  
B. : Stone object no. 1, (an alabaster cup).  
C. : Stone objects, nos. 2-5.
- Pl. XXVII : Stone objects, nos. 6-8.
- Pl. XXVIII : Coins.



## ILLUSTRATIONS





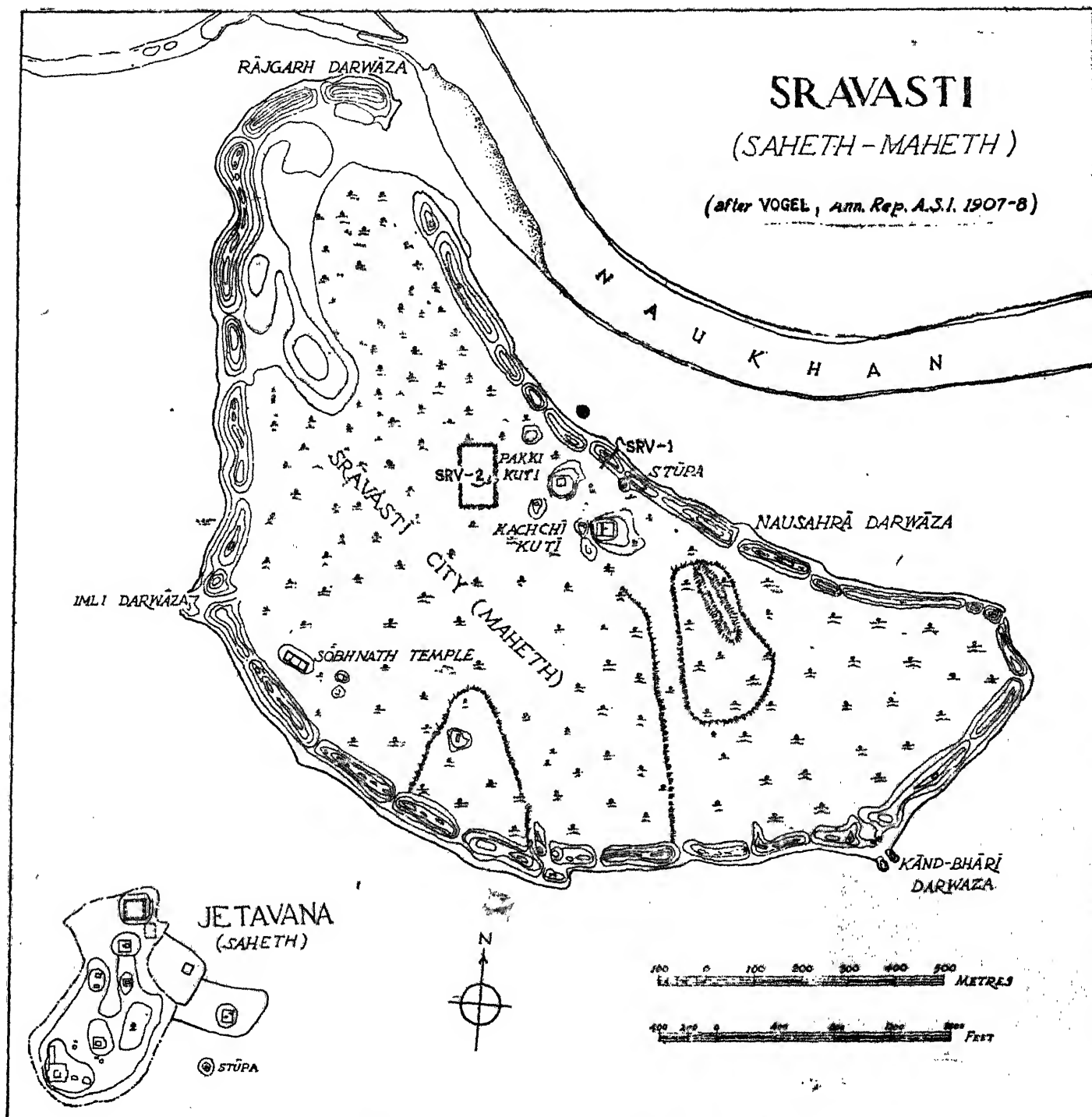
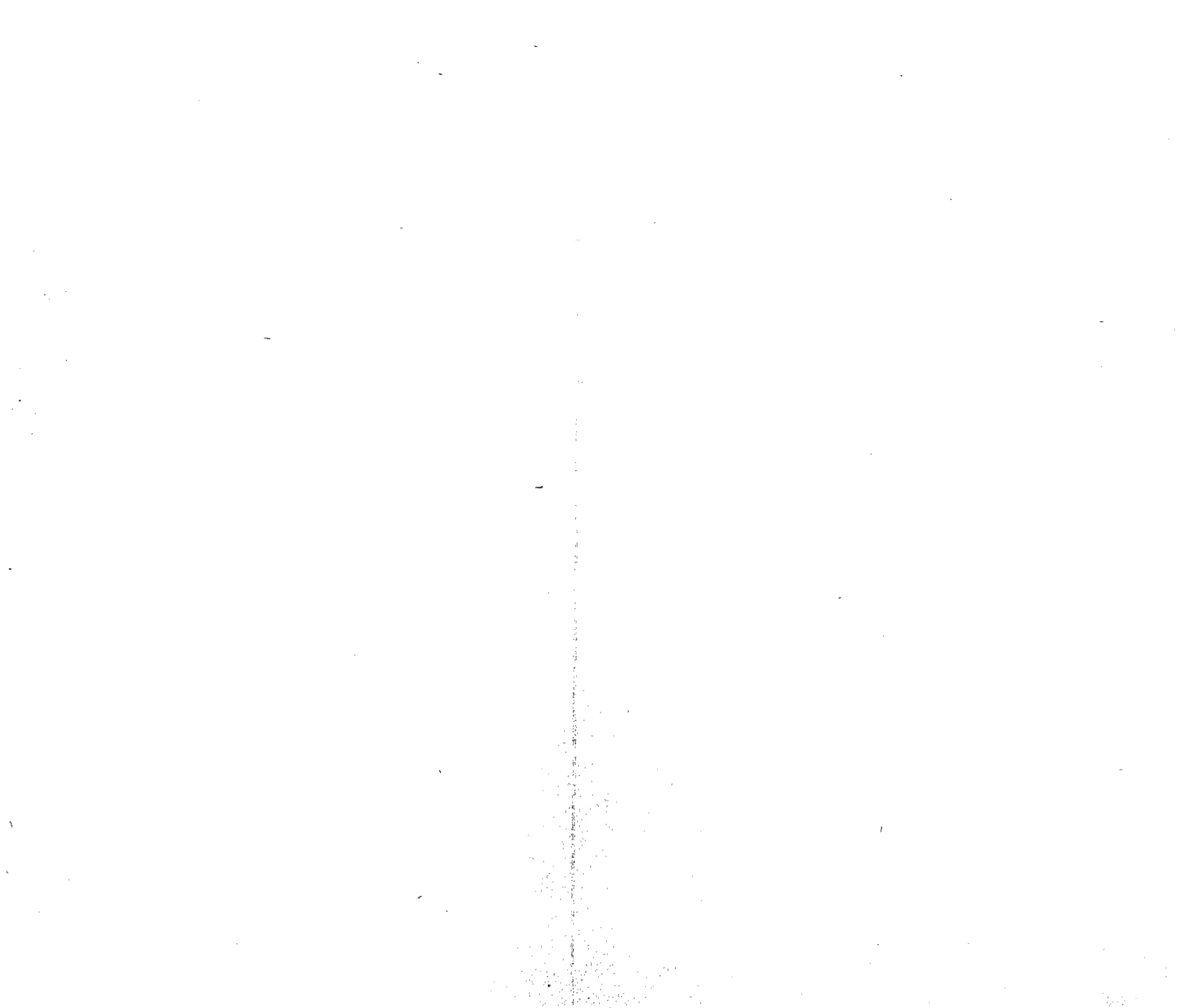


Fig. 1. Site-plan of Sravasti (after Vogel)



# SRAVASTI 1959 (SRV-2)

SCALE OF 2 1 0 2 4 6 8 10 12 FEET

SCALE OF 1 0 1 2 3 METRES

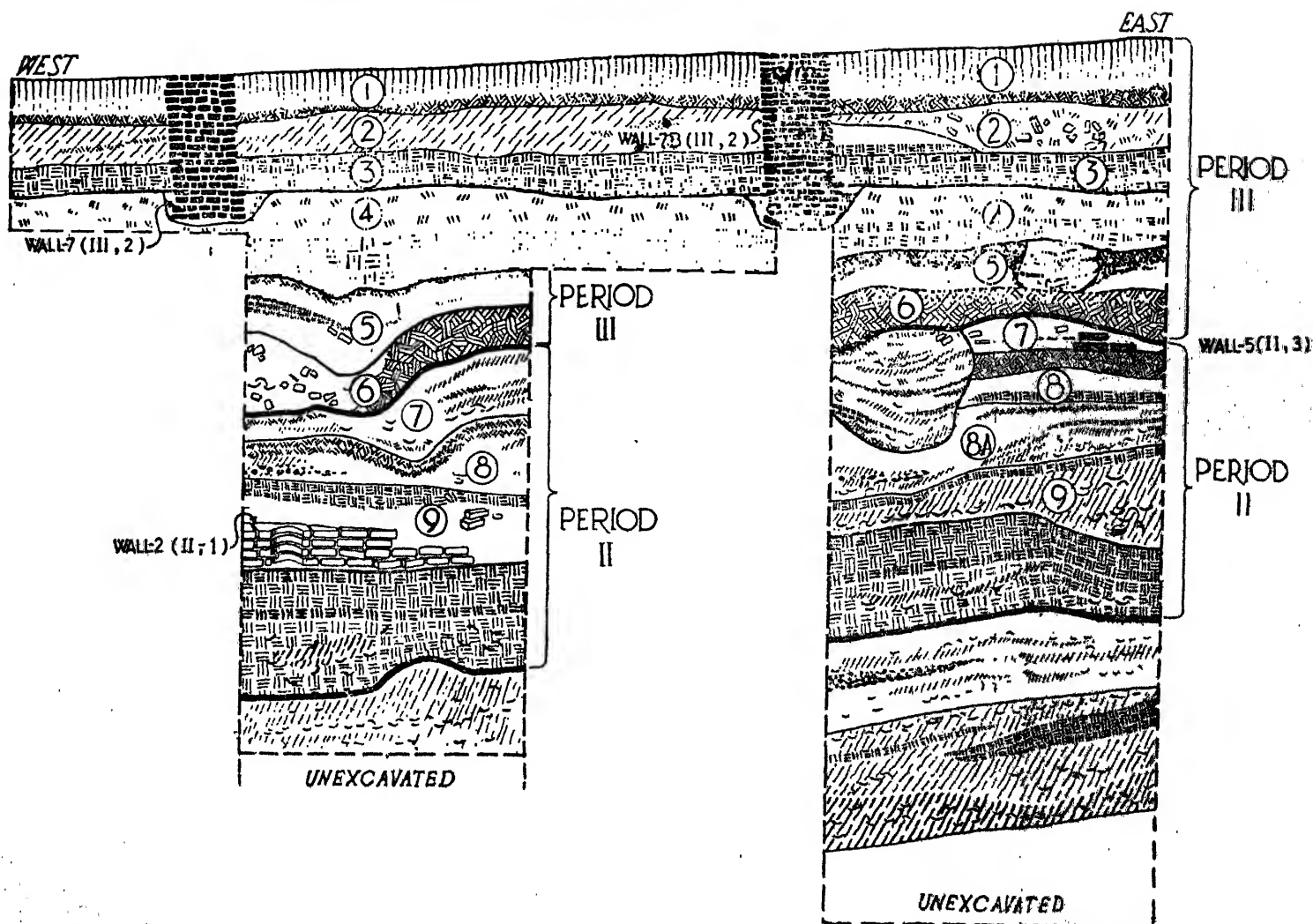
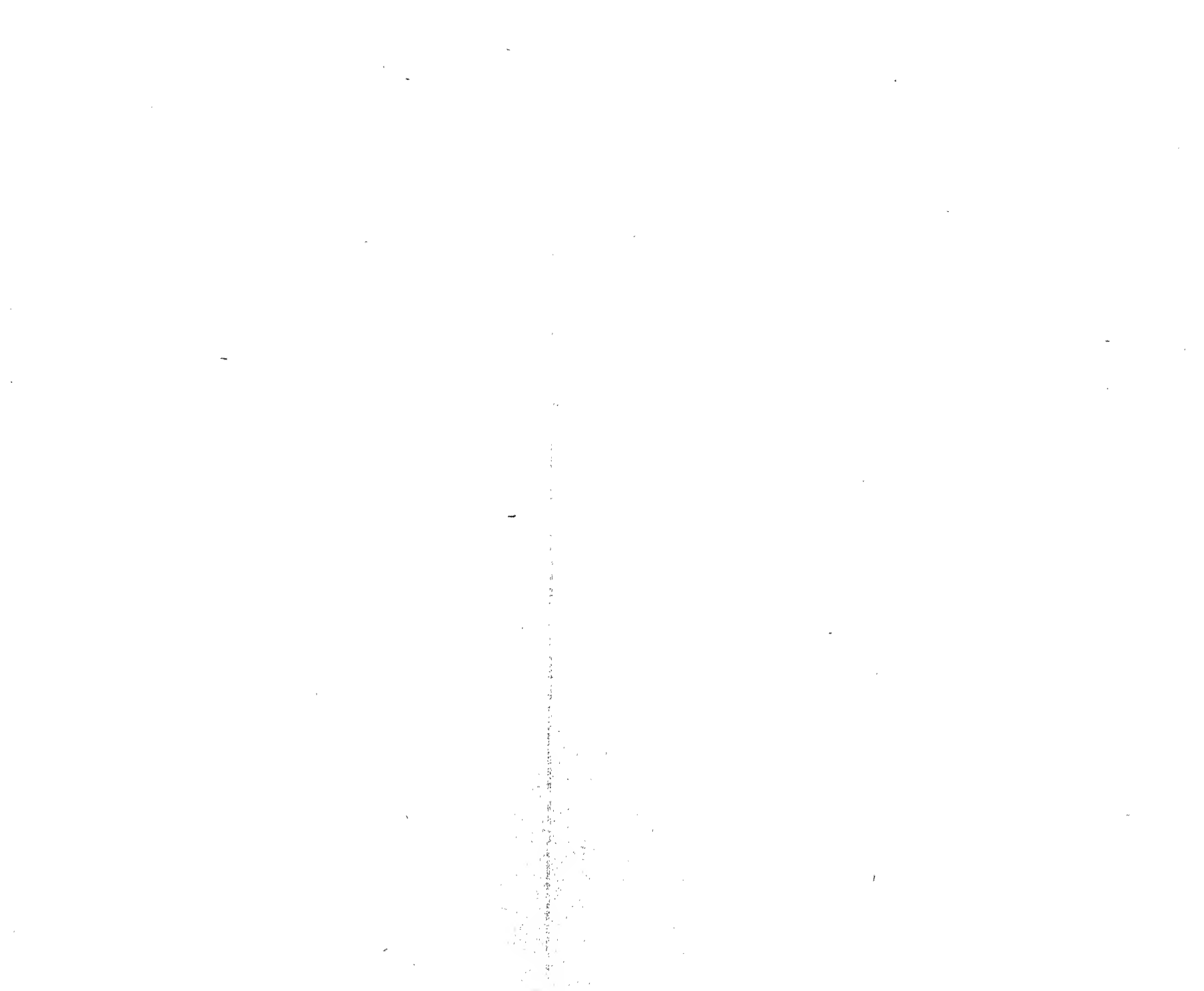
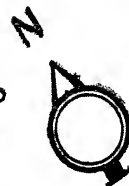


Fig. 3. Section-Habitation Area (SRV-2)

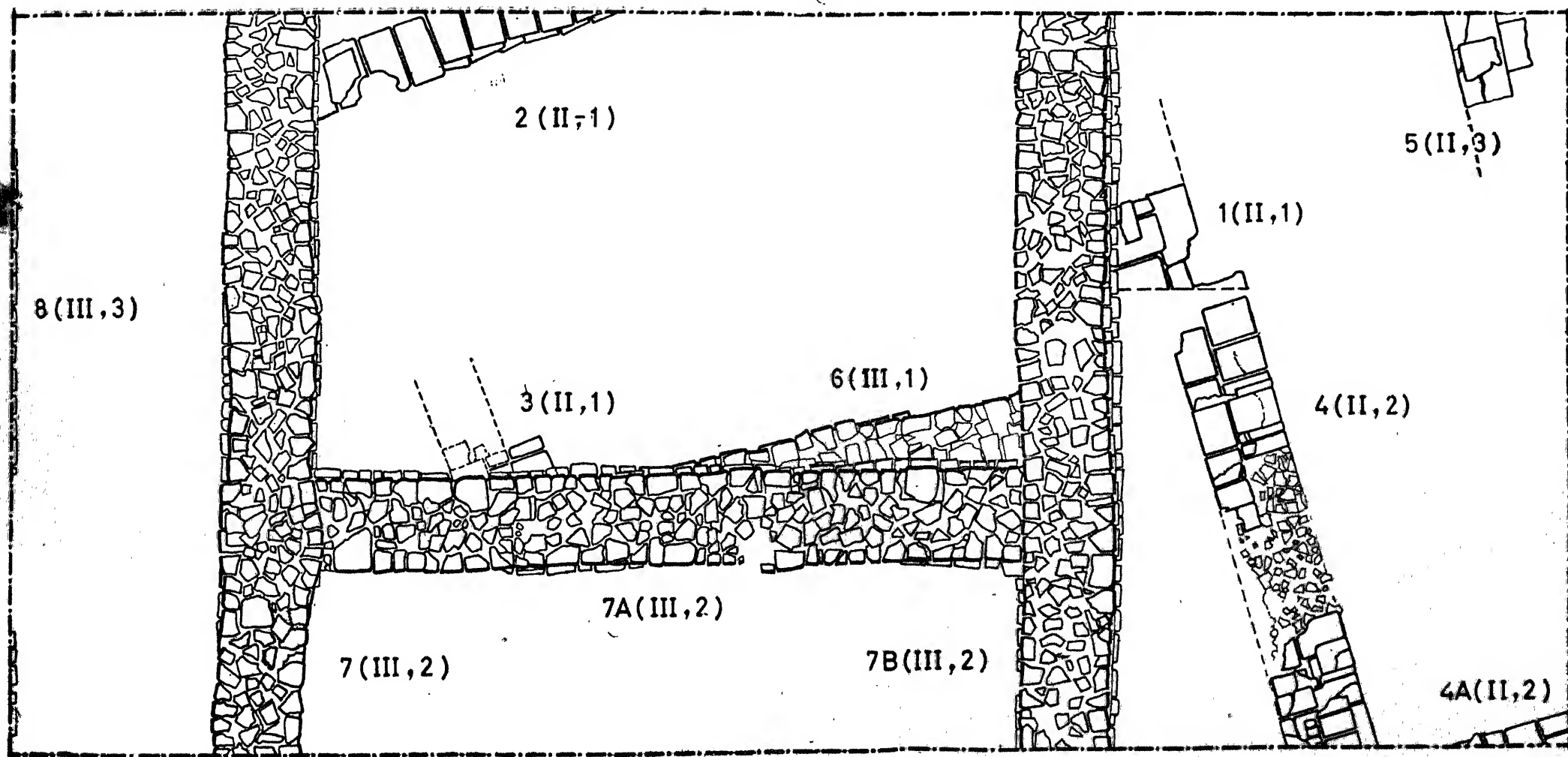


# SRAVASTI 1959 SRV-2 PLAN

SCALE OF FEET



SCALE OF METRES



4 (II, 2) = STRUCTURE No 4, PERIOD II, SUB PHASE 2

A.S.I.

Fig. 4. Plan-Habitation Area (SRV-2)



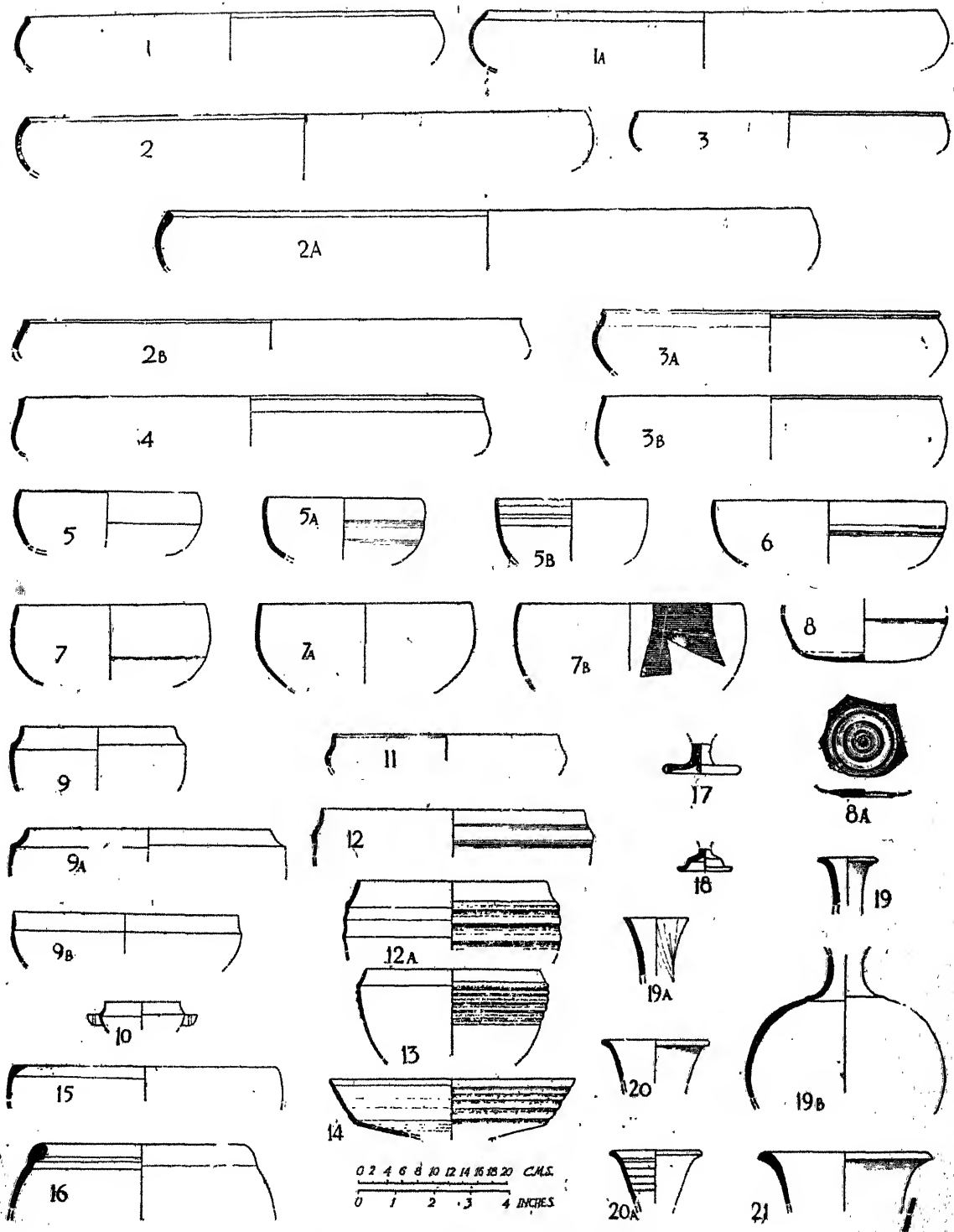
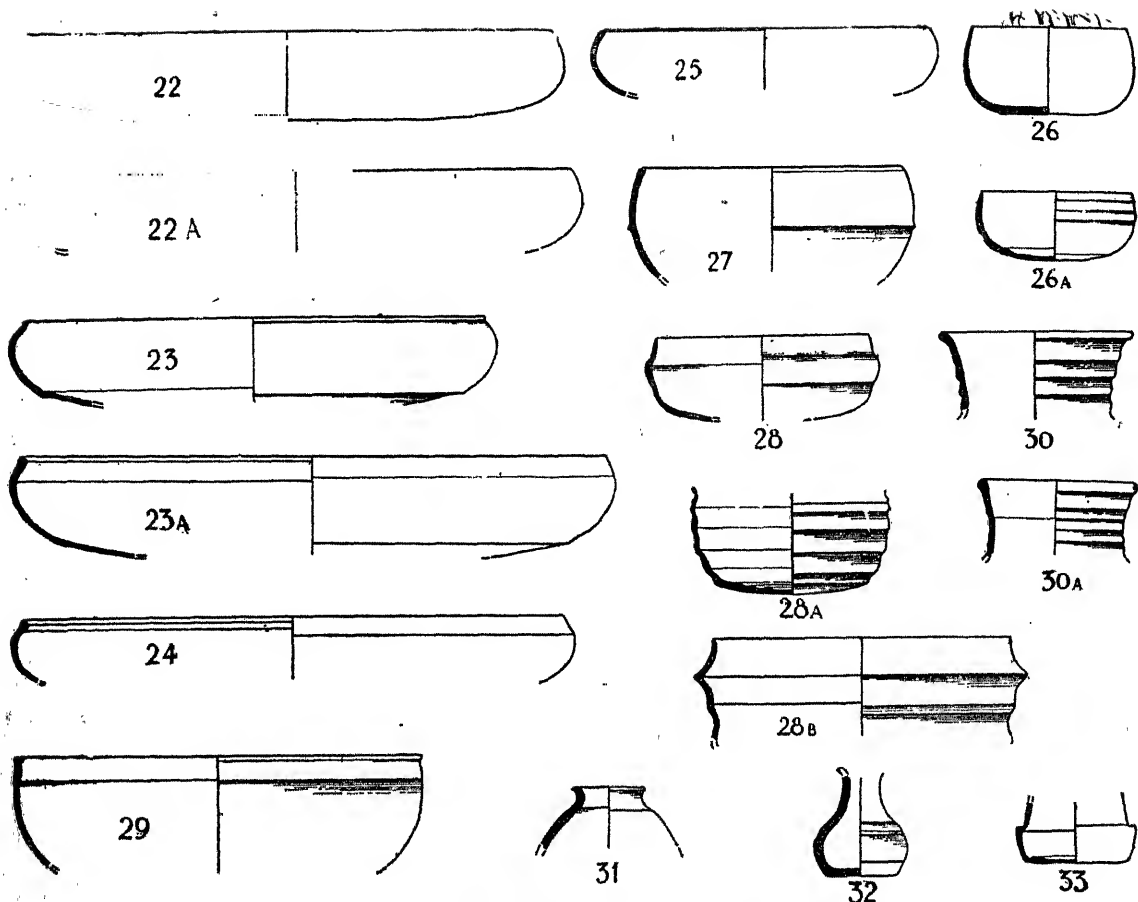
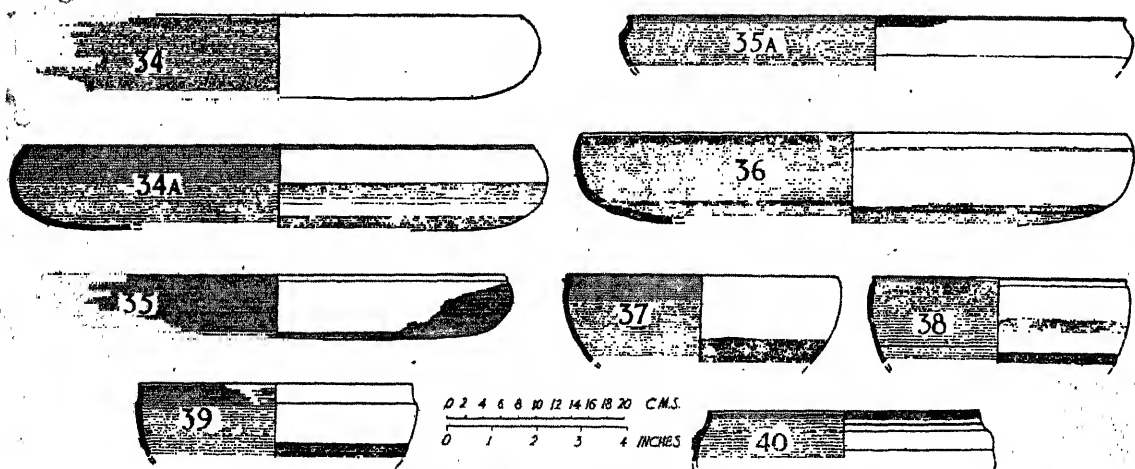


Fig. 5. N. B. P. Ware types, Period I



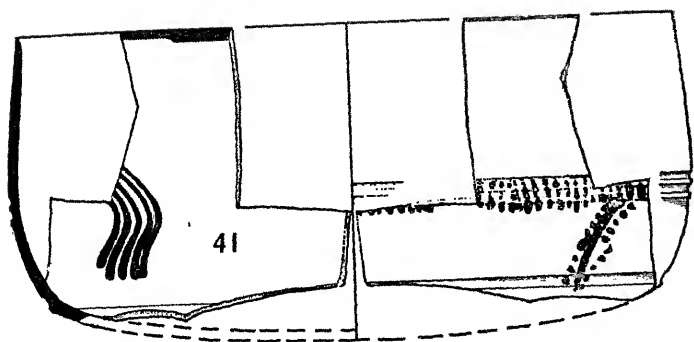


A BLACK-POLISHED WARE.



B BLACK & RED WARE

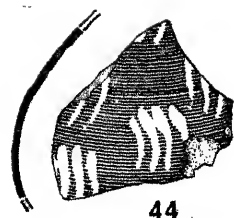
Fig. 6.



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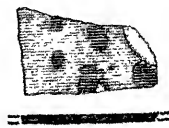
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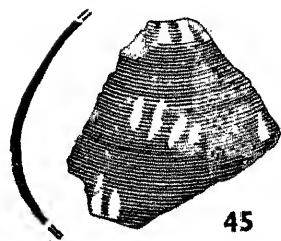
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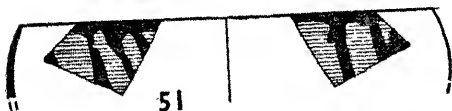
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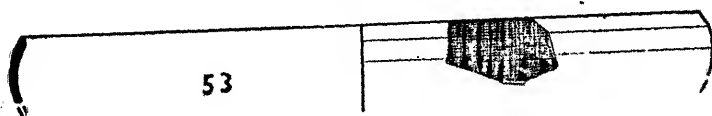
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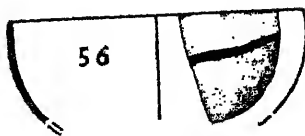
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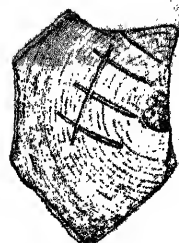
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57

0 2 4 6 8 10 12 14 16 18 20 C.M.S.  
0 1 2 3 4 INCHES

Fig. 7. Painted pottery, Period I

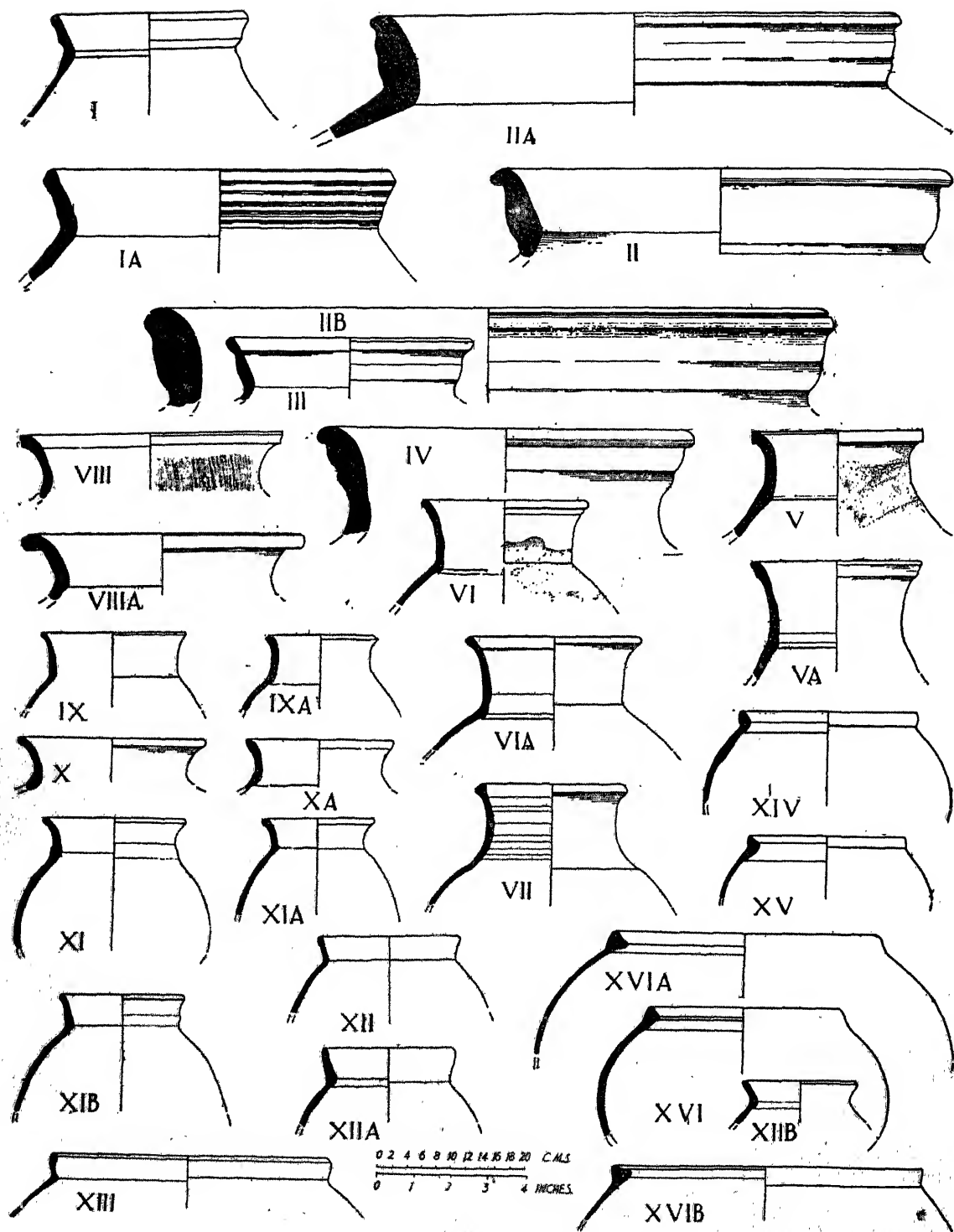


Fig. 8. Plain Red ware types, Period I

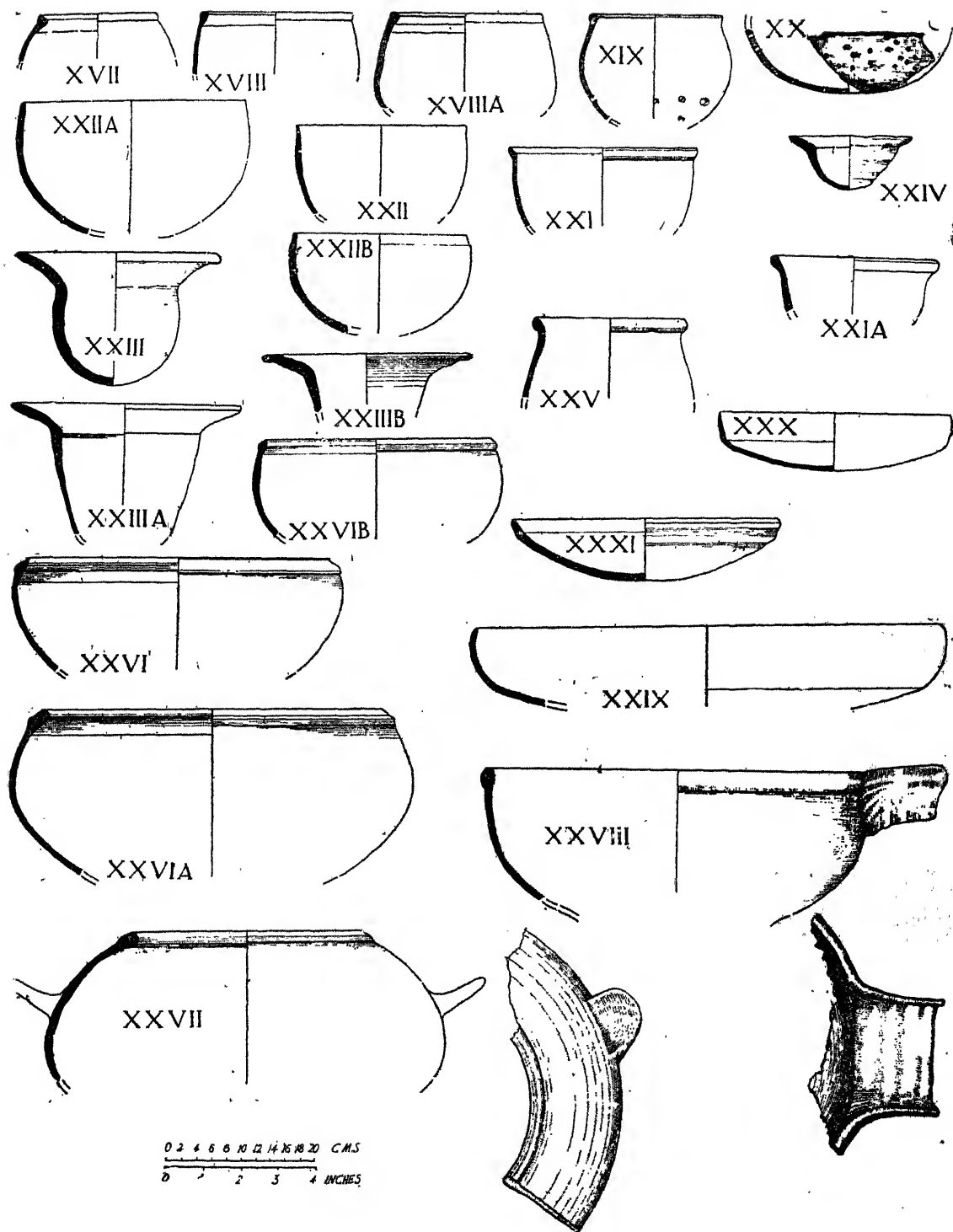


Fig. 9. Plain Red ware types, Period I

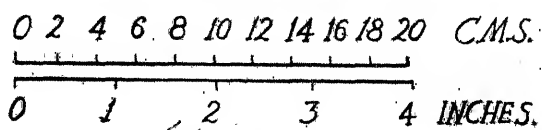
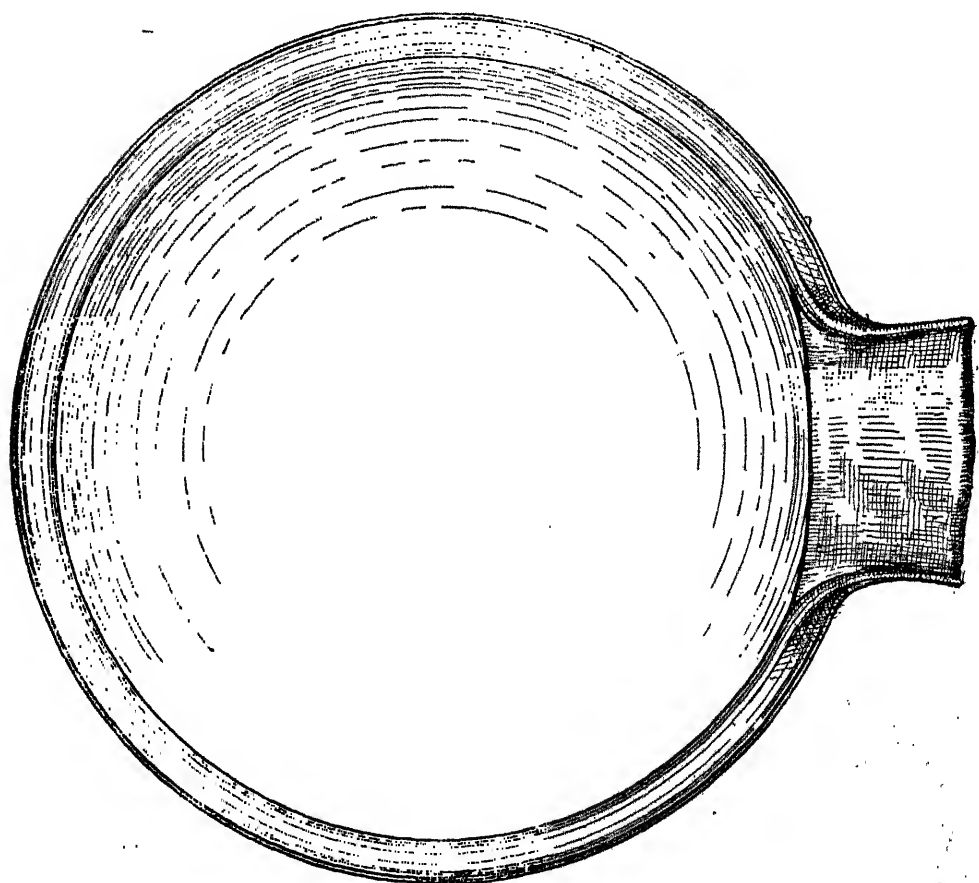
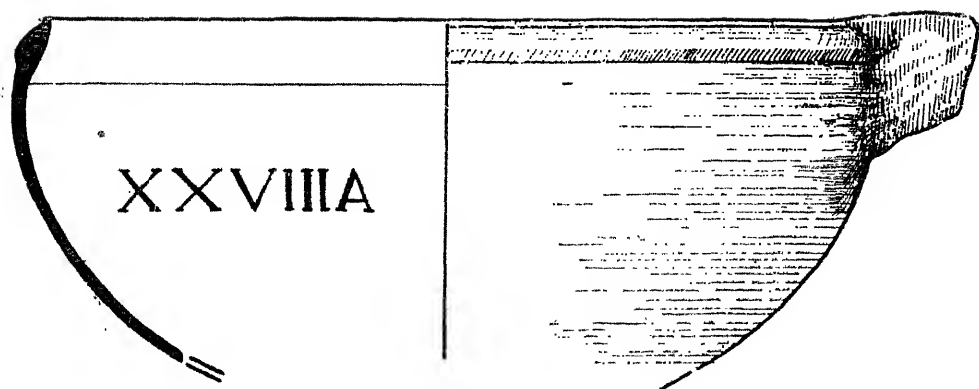


Fig. 10. Plain Red ware types, Period I



XXXII



XXXIII



XXXIV



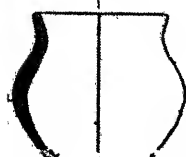
XXXV



XXXVI



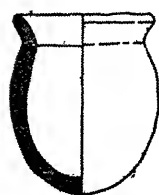
XXXVII



XXXVIII



XXXVIII A



XXXIX



XL



XLI



XLII



XLIII



XLIV



XLV



XLV A



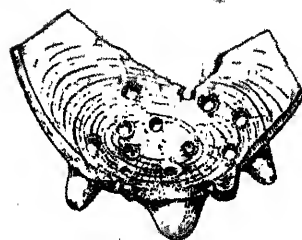
XLVII



XLVI



XLVIII



XLIX



L

CM'S 0 1 2 3 4 5 6 7 8 9 10  
INCHES 0 1 2 3 4

Fig. 11. Plan Red ware types, Period I

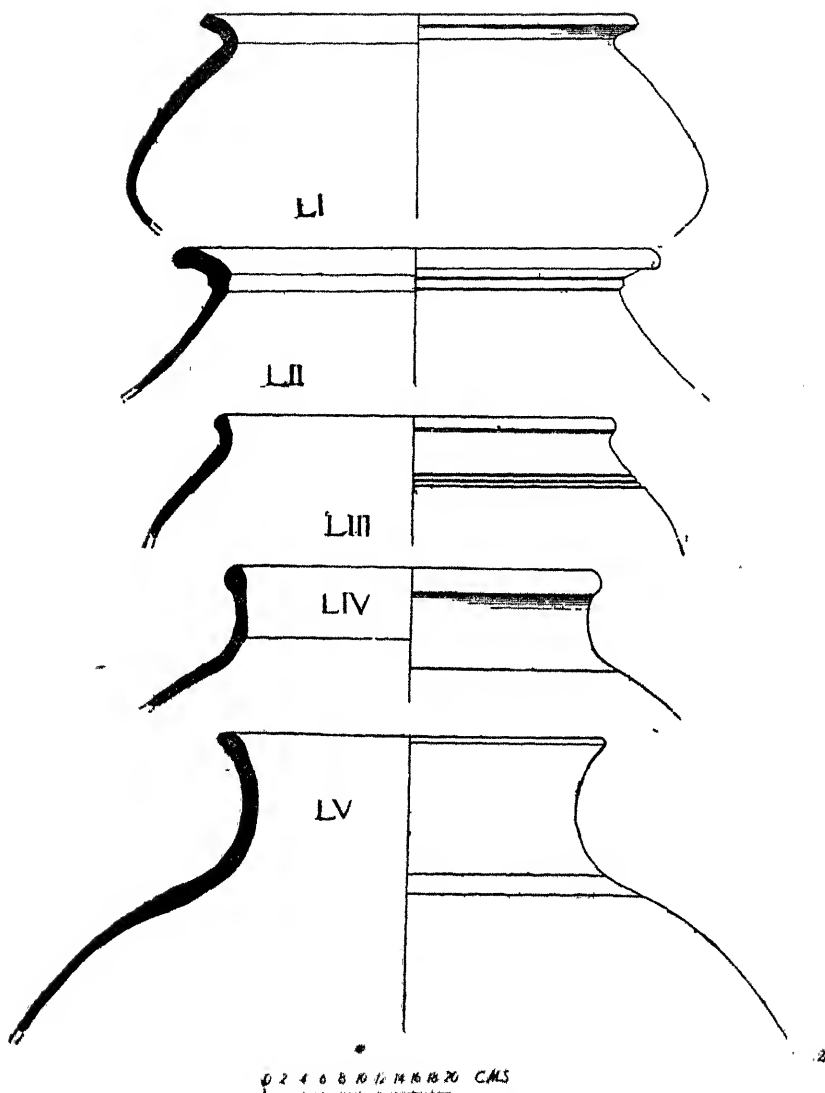


Fig. 12. Plain Red ware types, Period I

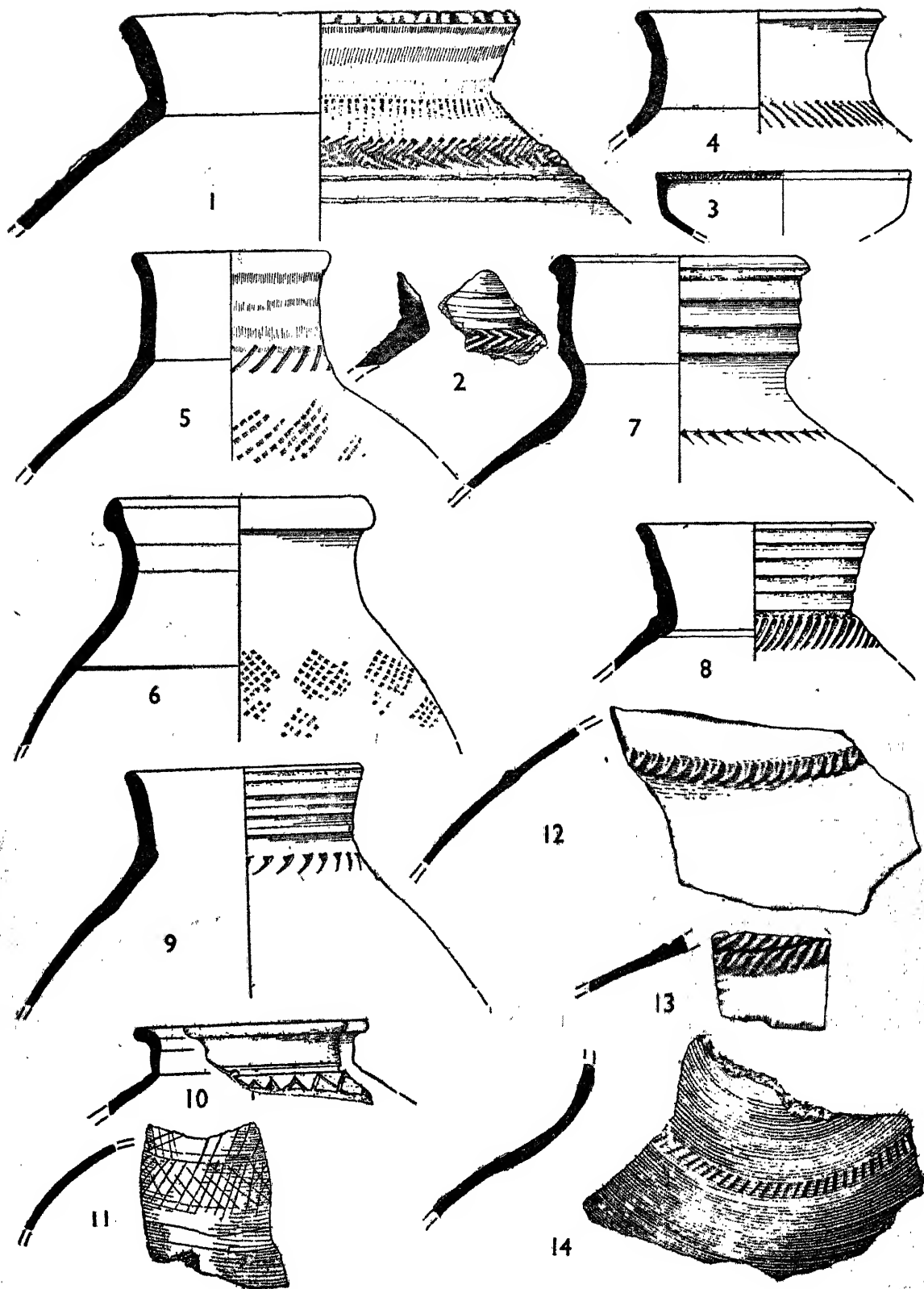


Fig. 13. Decorated Ware, Period I



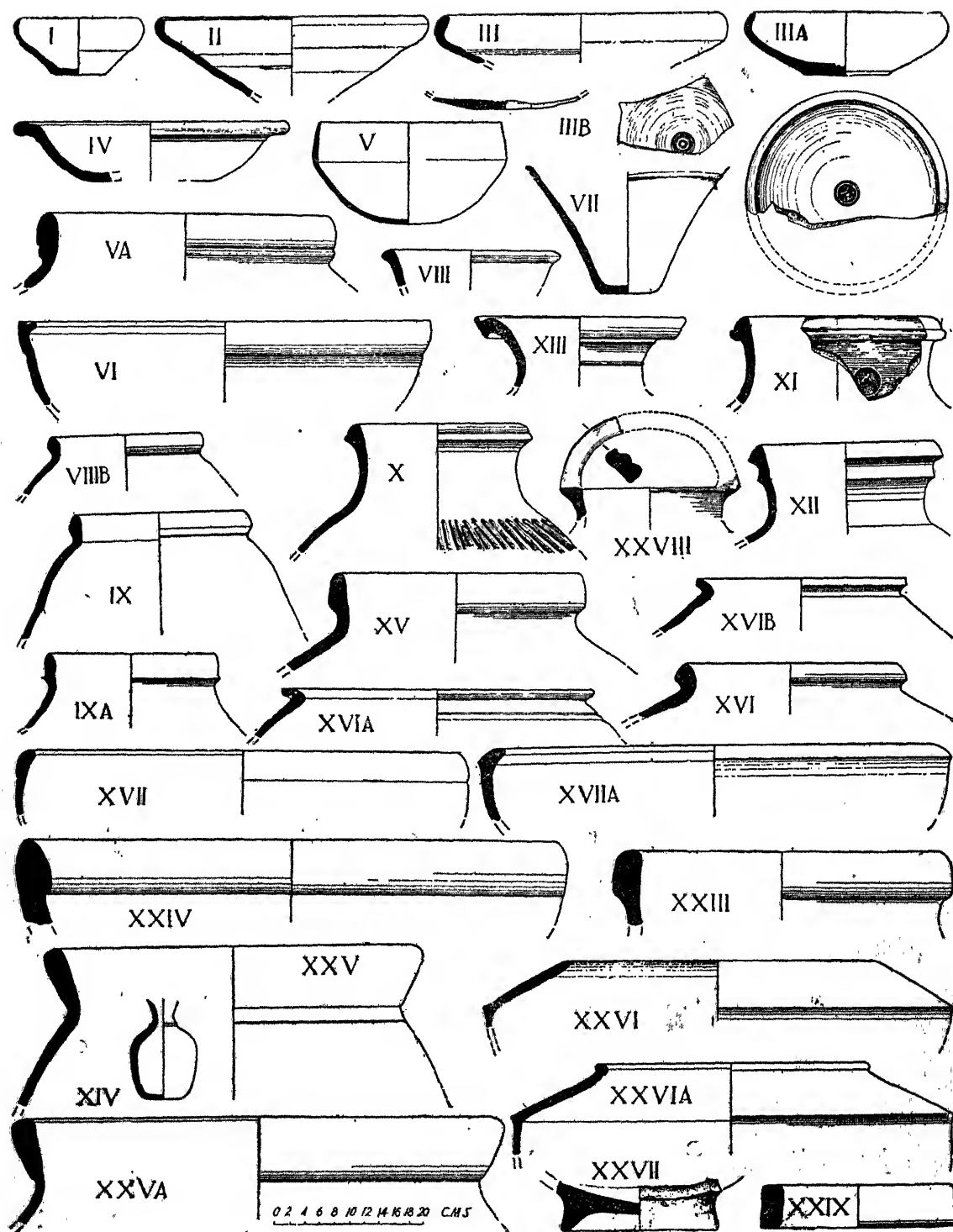


Fig. 14. Plain Red Ware, Period II

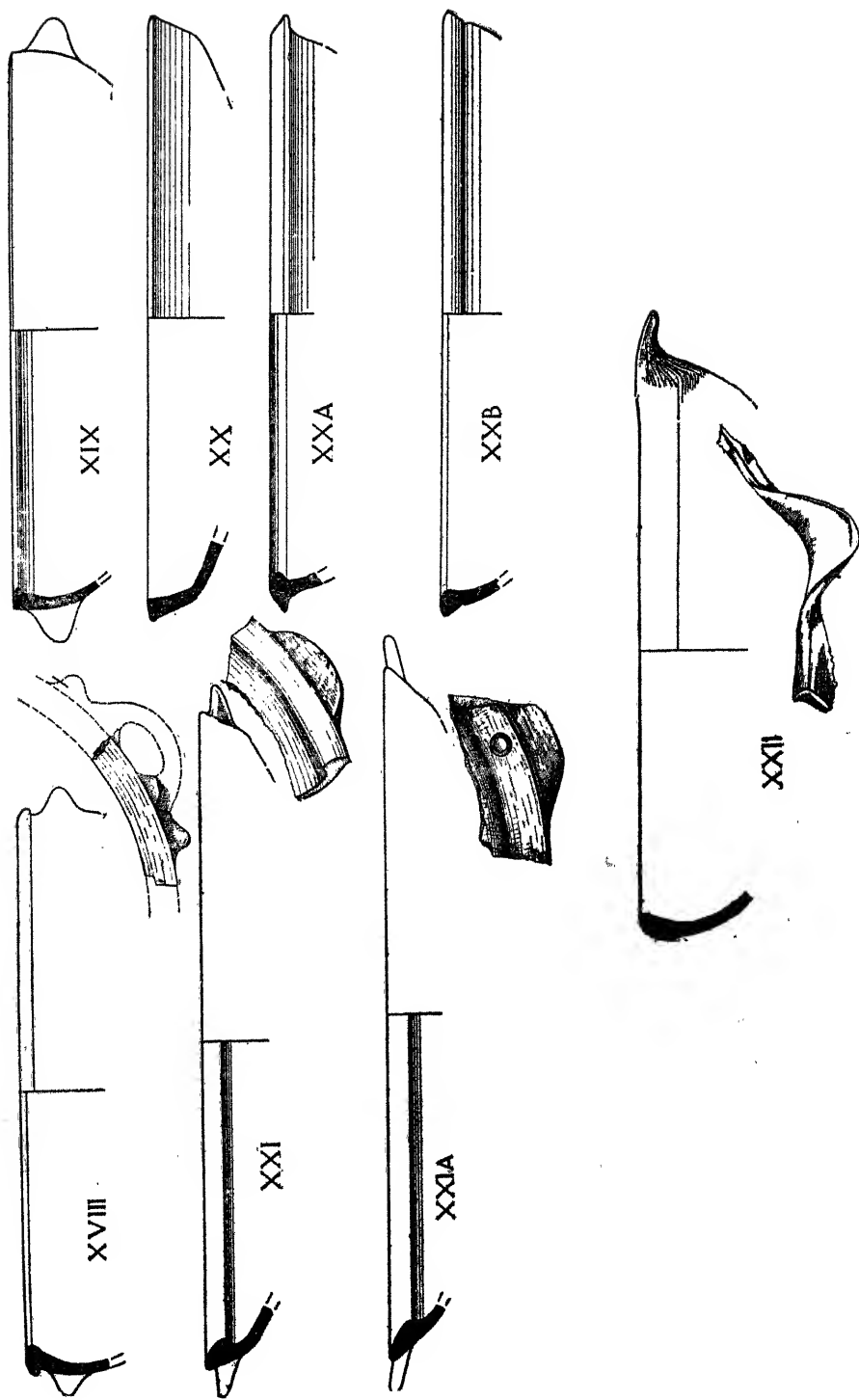


Fig. J5. Plain Red Ware, Period II

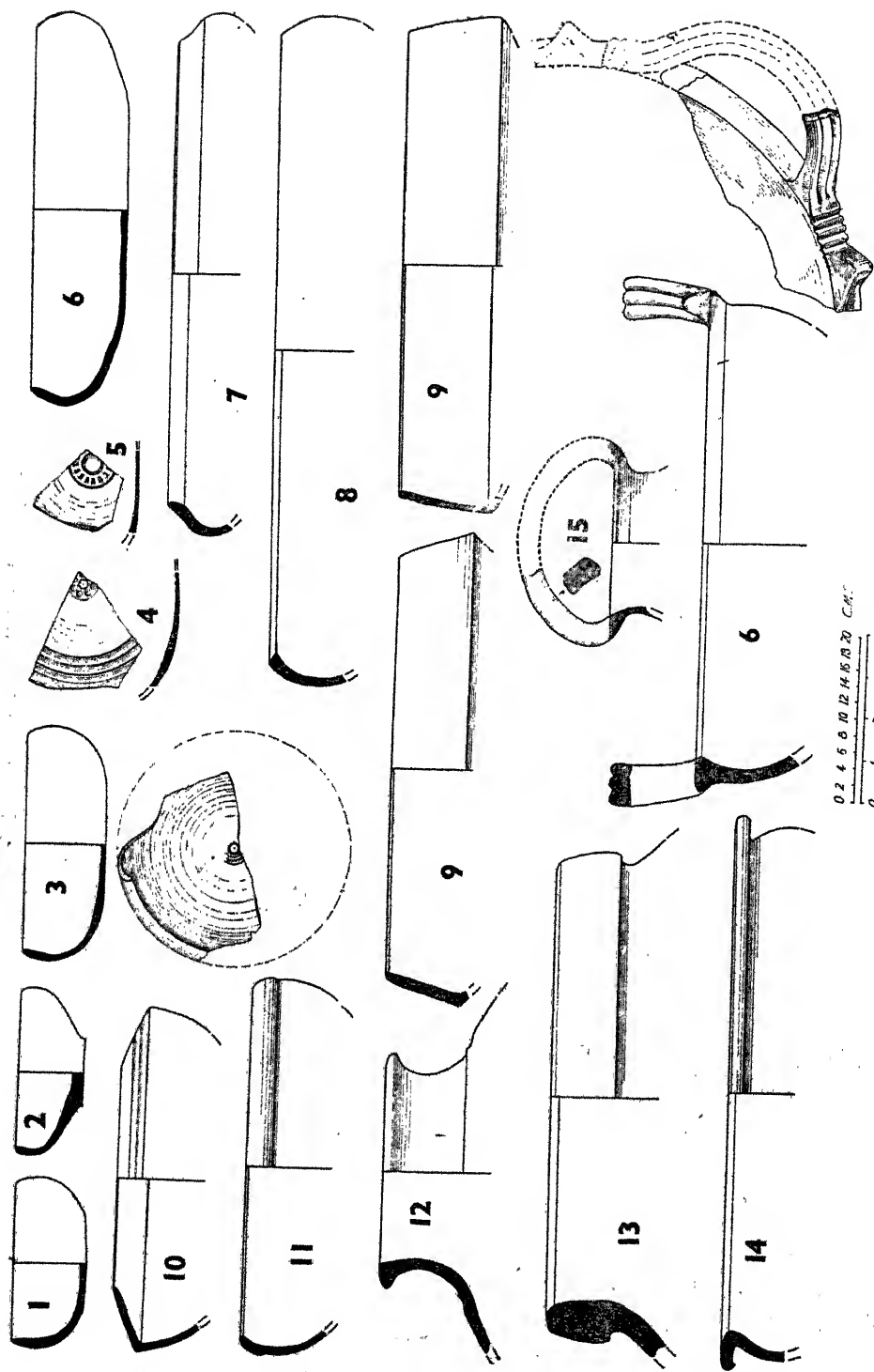


Fig. 16. Grey Ware, Period II

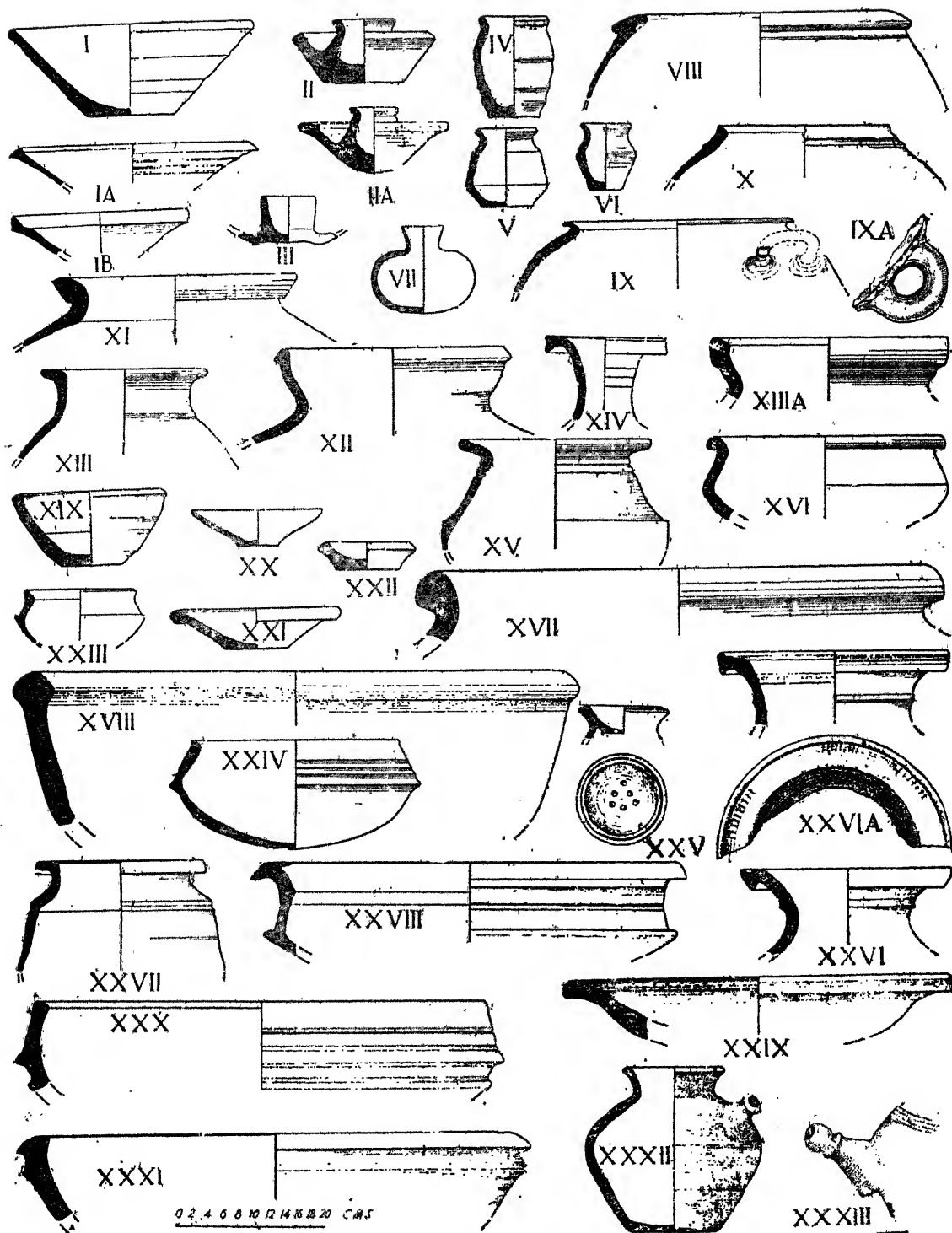
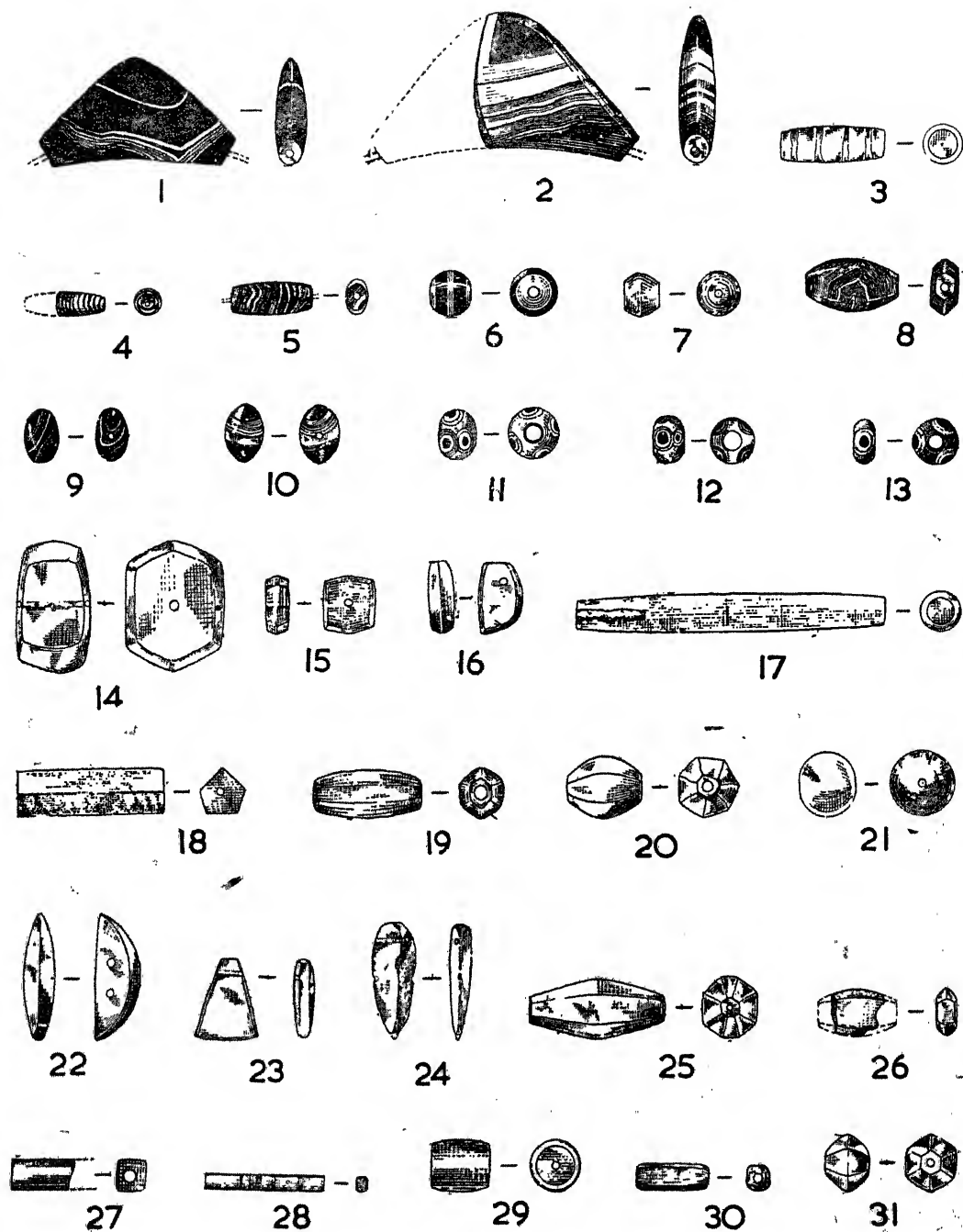


Fig. 17. Plain Red Ware, Period III



0 1 2 3 4 5 6 C.M.S.

Fig. 18. Beads from excavations

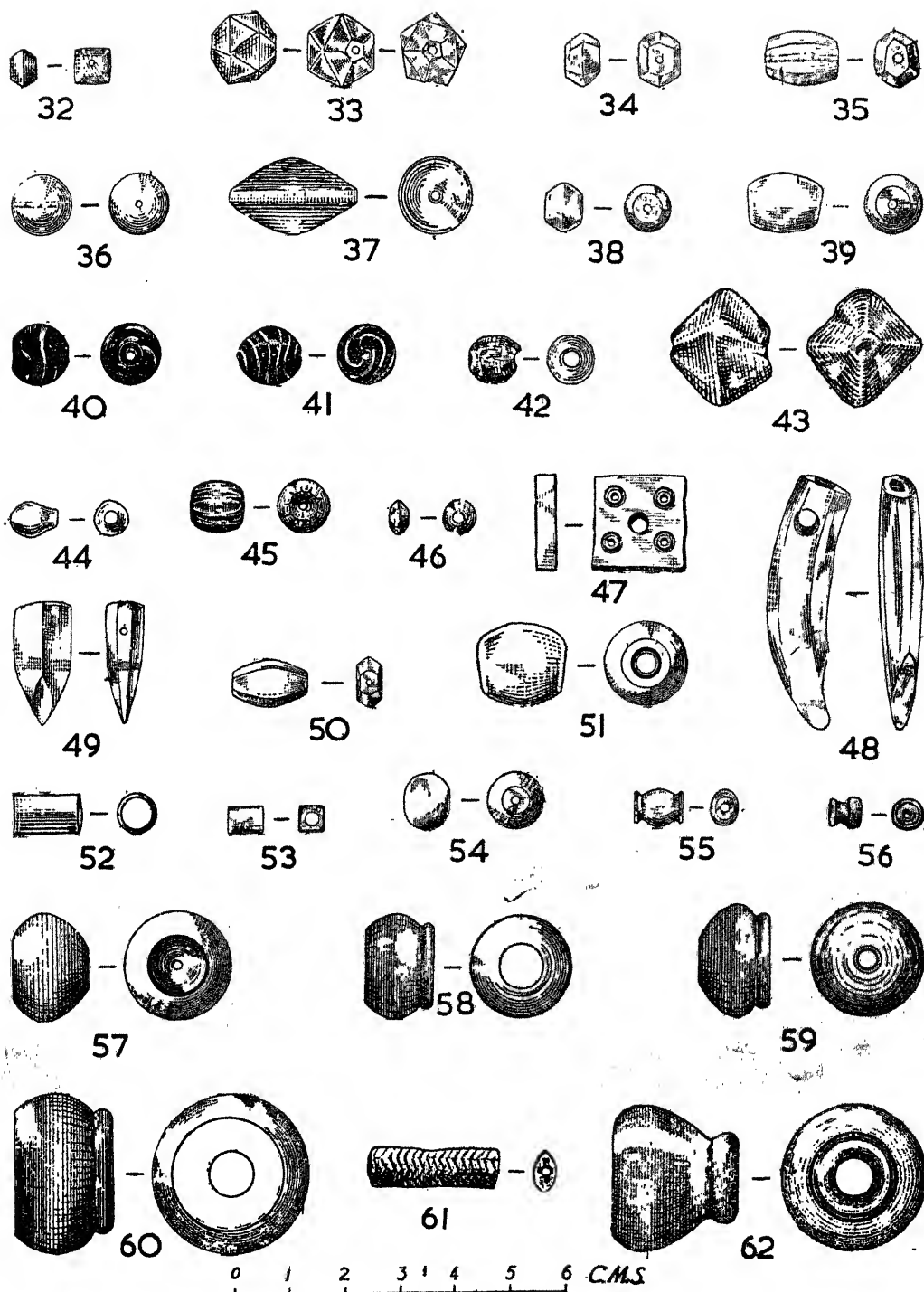
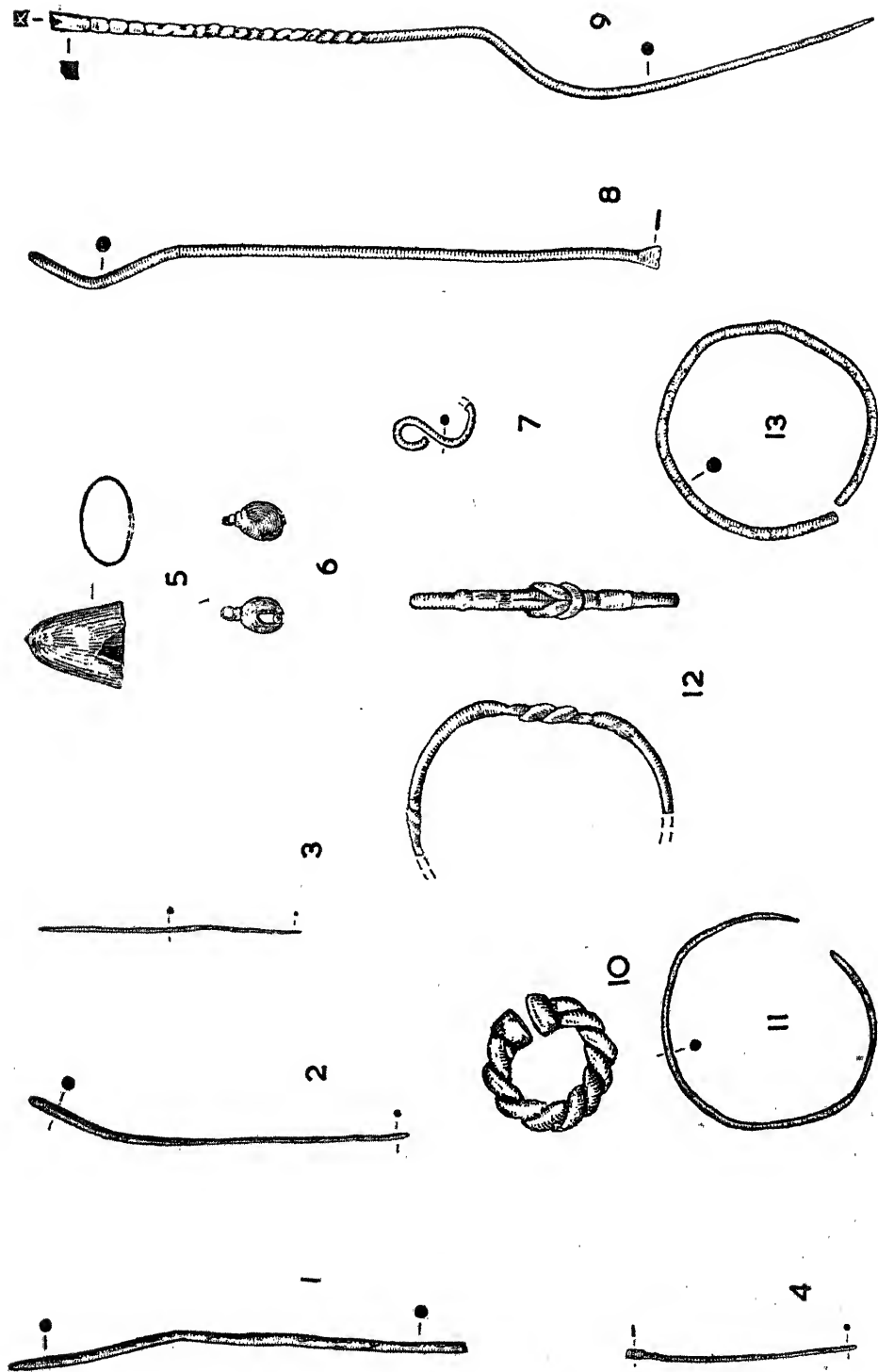


Fig. 19. Beads from excavations



0 2 4 6 8 10 12 14 16 18 20 C.M.S.

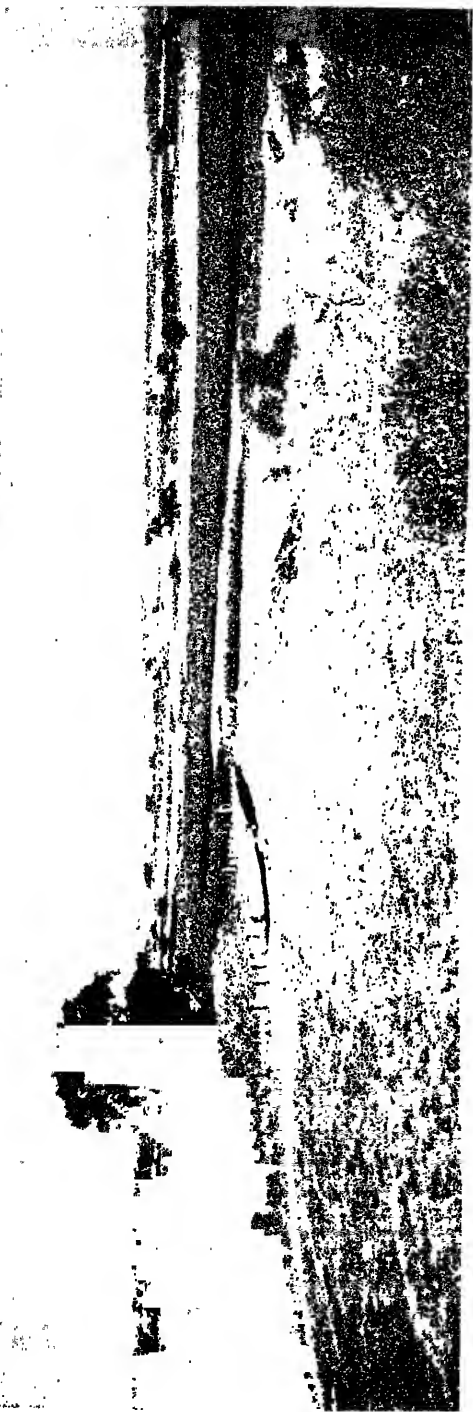
Fig. 20. Copper objects



Fig. 21. Iron objects.







Pl. I : Panoramic view of the site, with the area of excavation ( SRV-1 ) in the foreground and the river Rapti in the distant background.



Pl. II : A view of the city-wall from outside, showing the bastion towers at the western gateway.



Pl. III : A view of the burnt brick fortification walls, SRV-1.



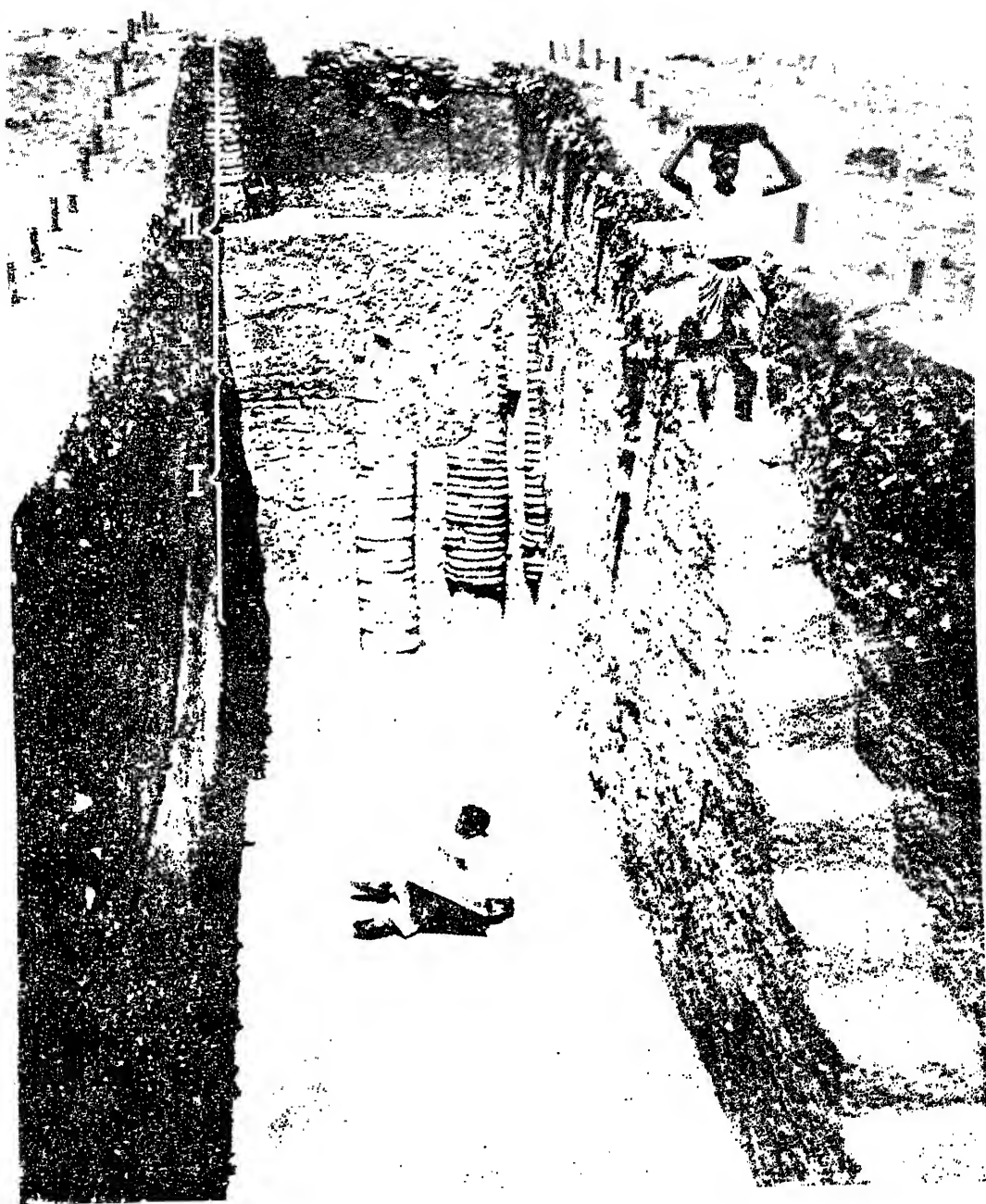
Pl. IV : A brick wall with a socket in the masonry for a wooden post, Period II, SRV-2.



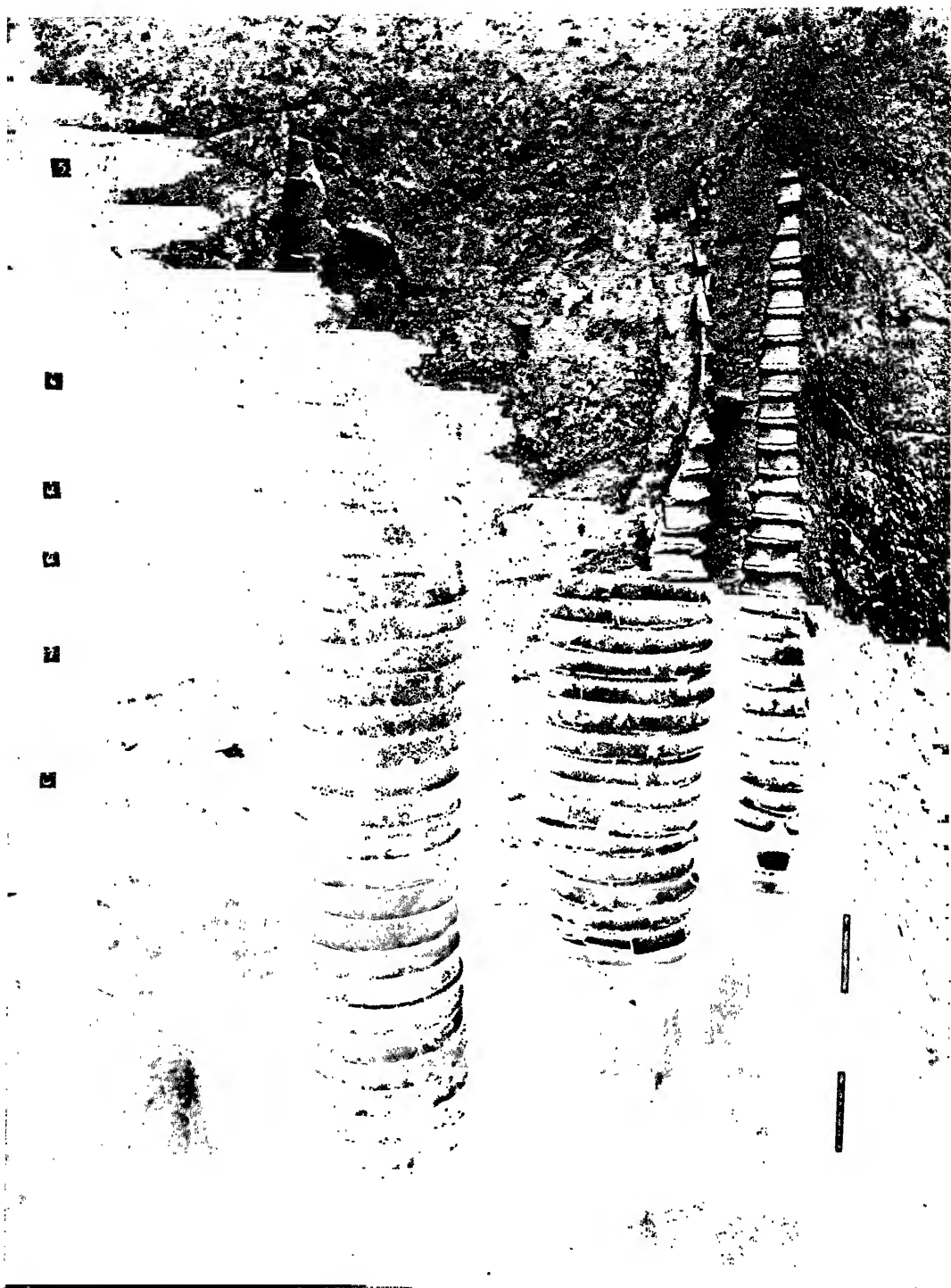
Pl. V : A close-up view of brick fortification walls, Period II.



Pl. VI : A view of the excavated trench ( SRV-1 ) from the northern side, showing A-Period I deposit, B-Mud rampart, Phase 1, C-Brick-fortification wall, Phase 2, D-Mud rampart, Phase 3, E-Brick fortification wall, Phase 4.

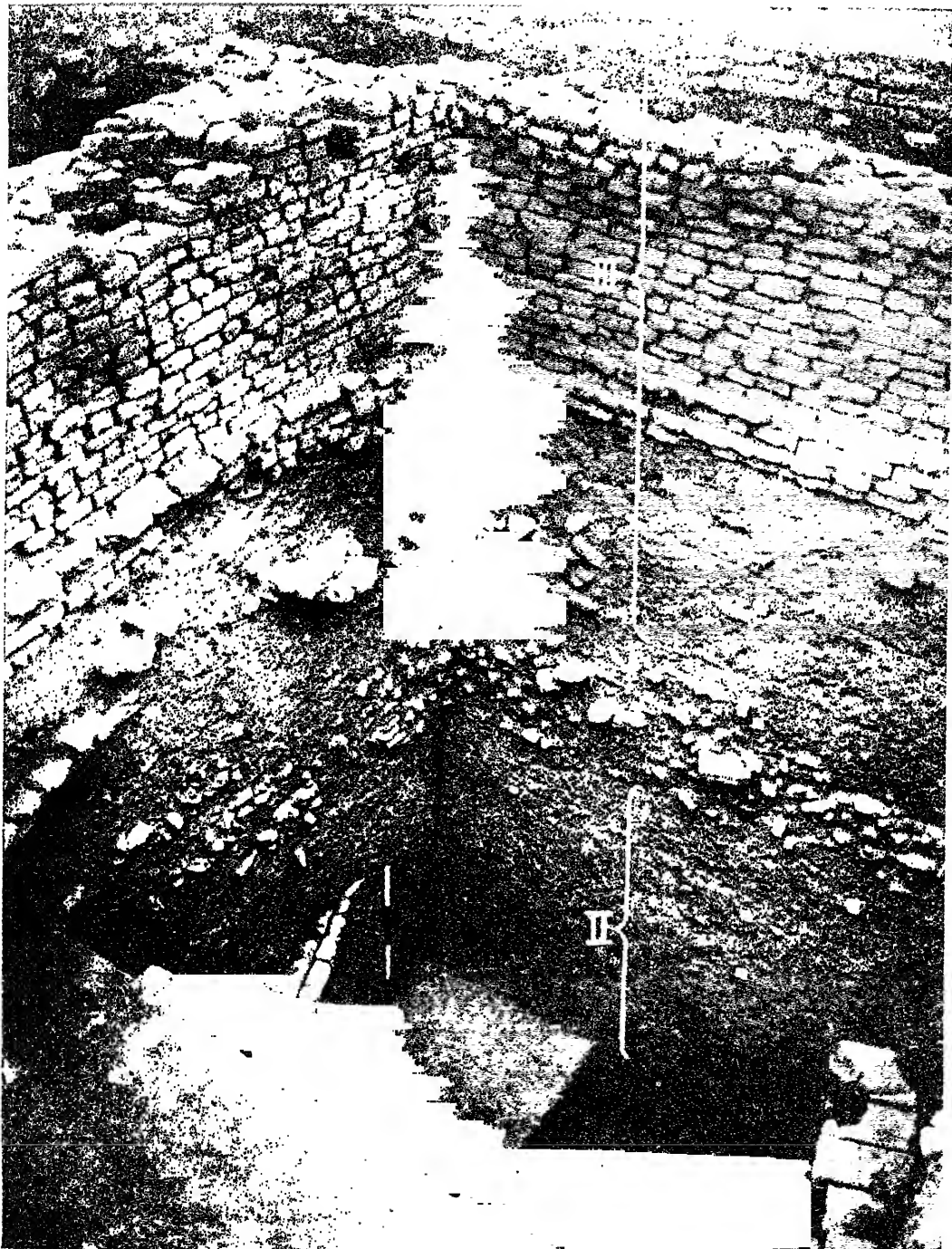


Pl. VII : A view of the excavated trench from southern side, SRV-1.



Pl. VIII : A close-up view of the Ring-well, Period II,



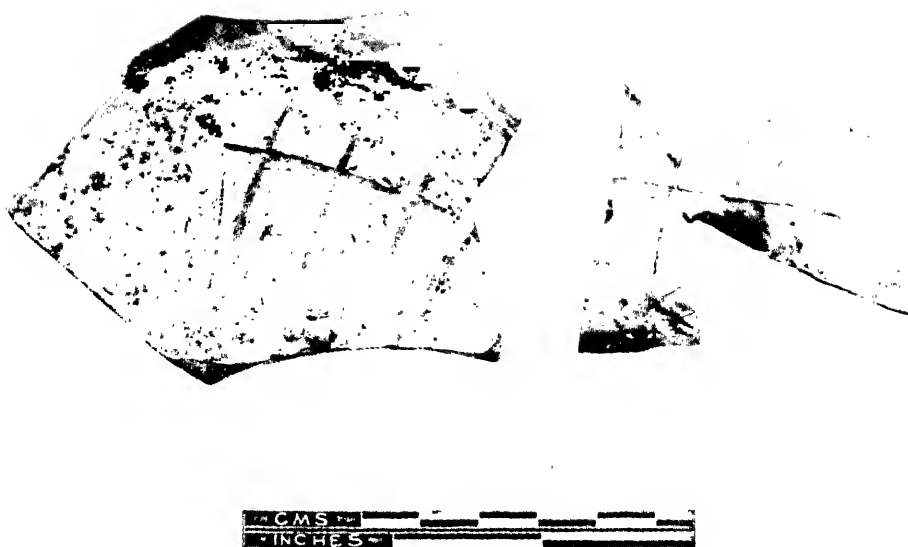


Pl. IX : A view of the excavated trench (SRV-2), showing sequence of deposits in Periods II and III.

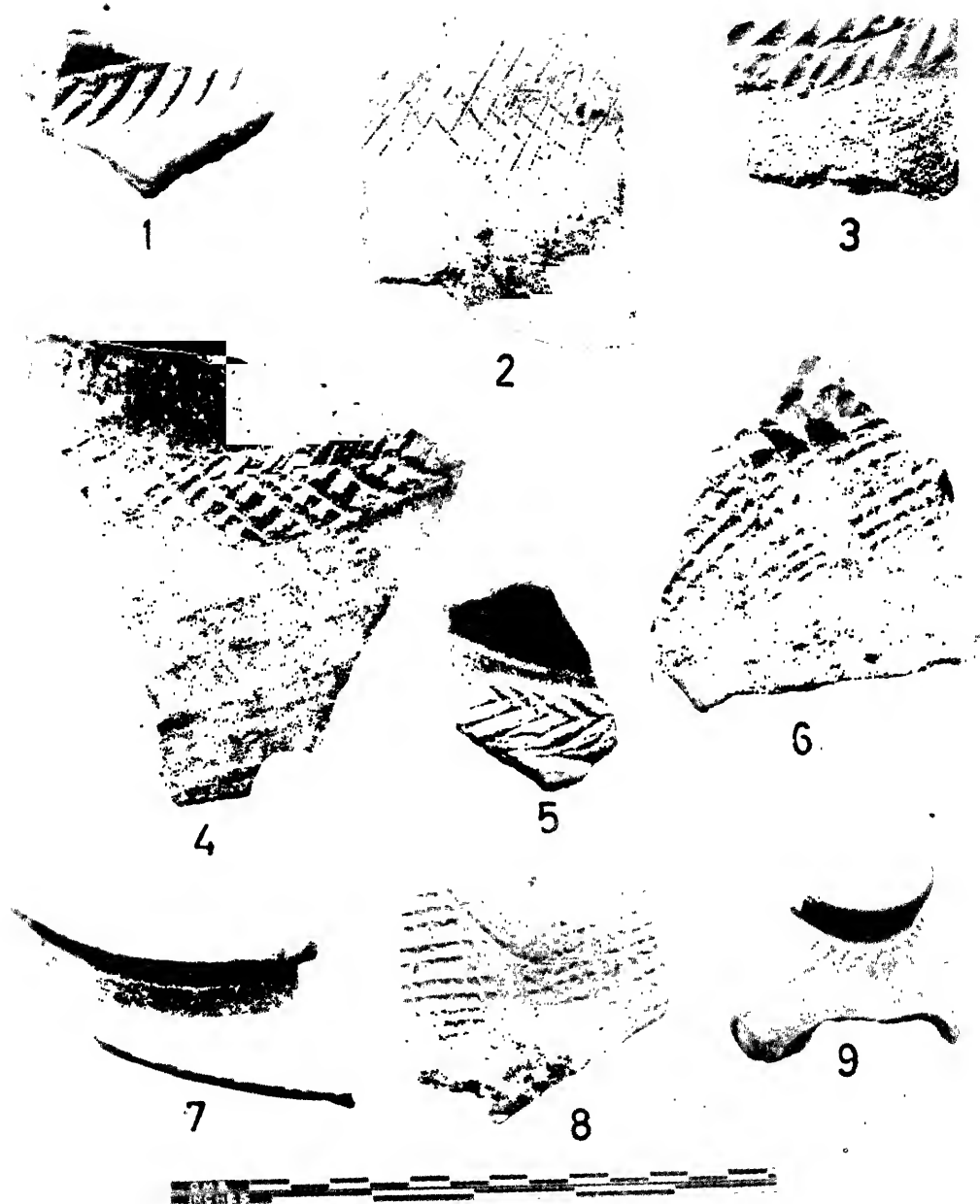




Pl. X : Structures of Period III, (SRV-2.)



Pl. XI : *Graffiti* marks on NBP Ware, Period I.



Pl. XII : Decorated pottery, Period I



1



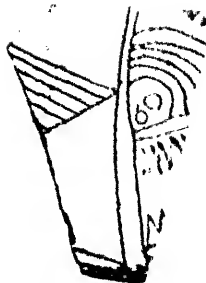
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Pl. XIII : Incised pottery, Period III



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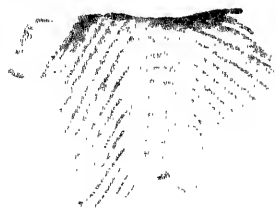
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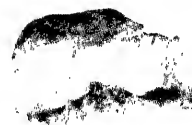
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Pl. XIV : Terracotta Human Figures.



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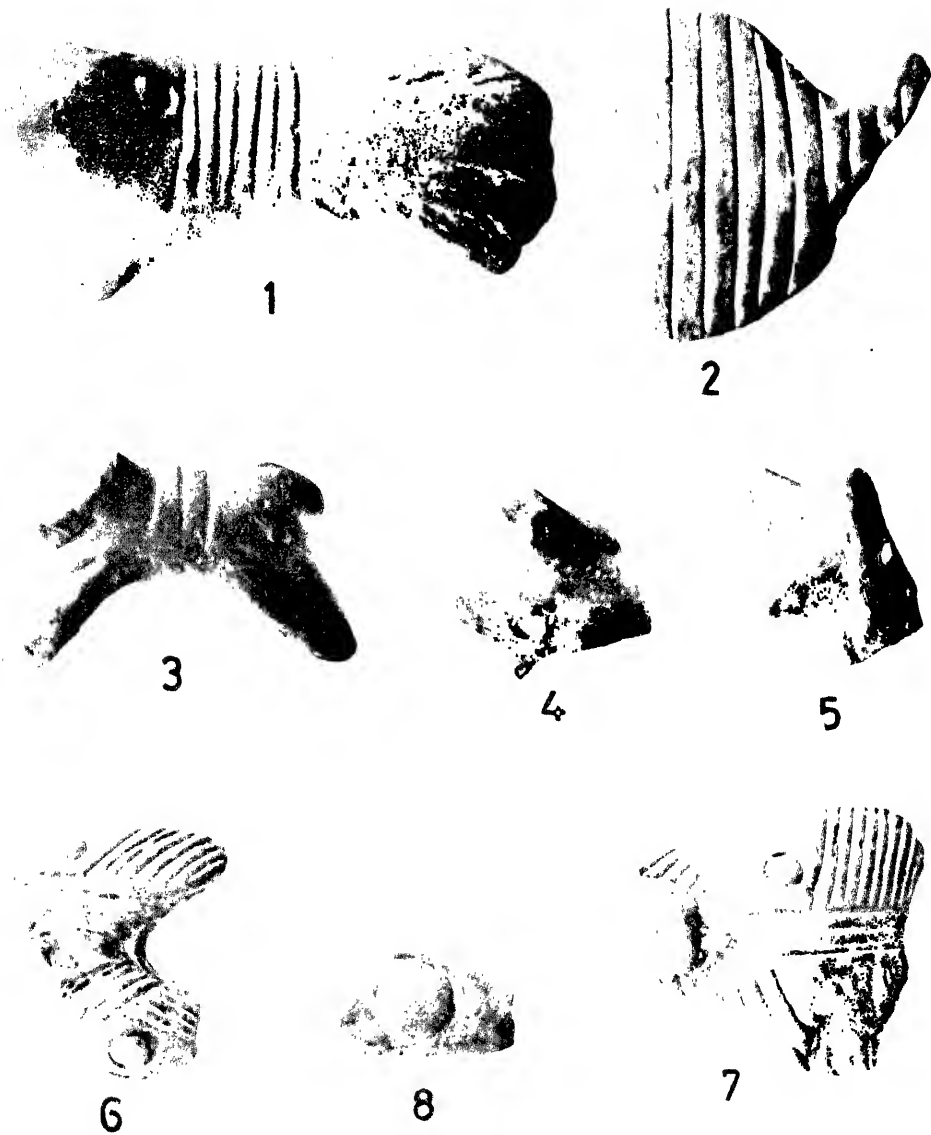


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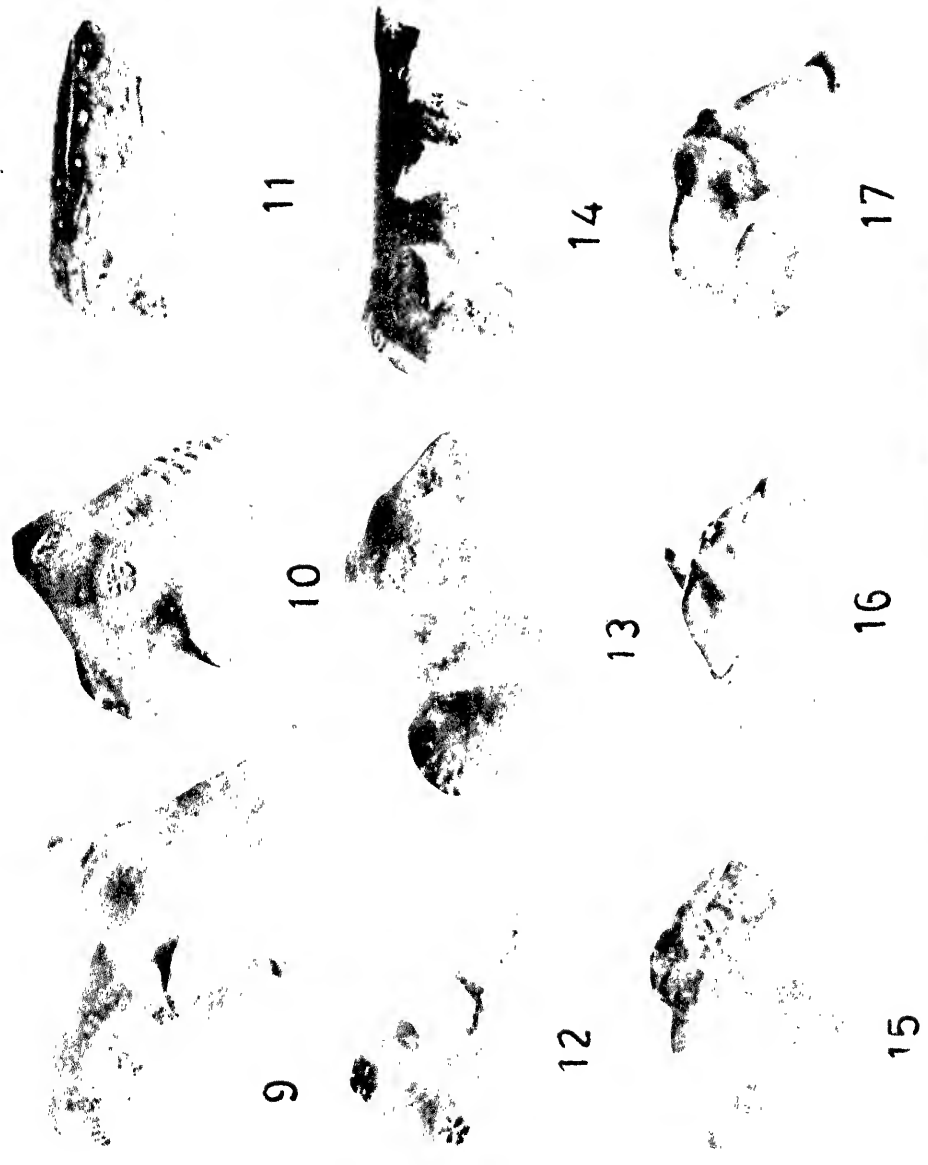


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Pl. XV : Terracotta Human Figures.



Pl. XVI : Terracotta Animal Figures



Pl. XVII : Terracotta Animal Figures





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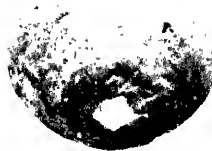
Pl. XVIII : Terracotta Discs.



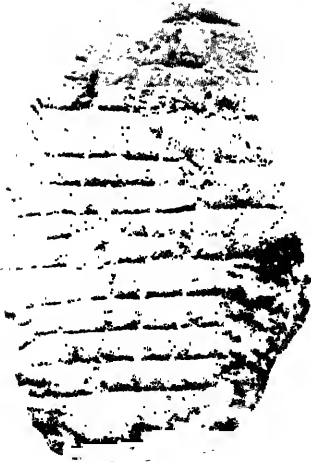
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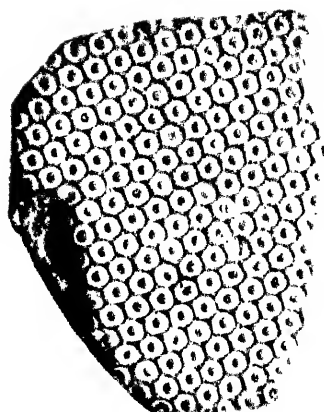
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Pl. XIX : Terracotta Miscellaneous objects.



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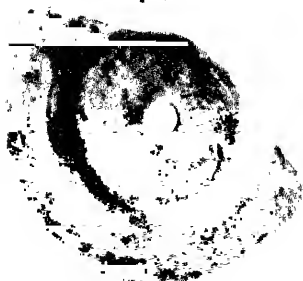
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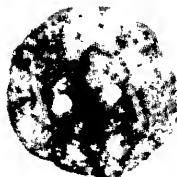
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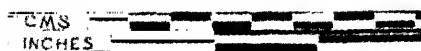
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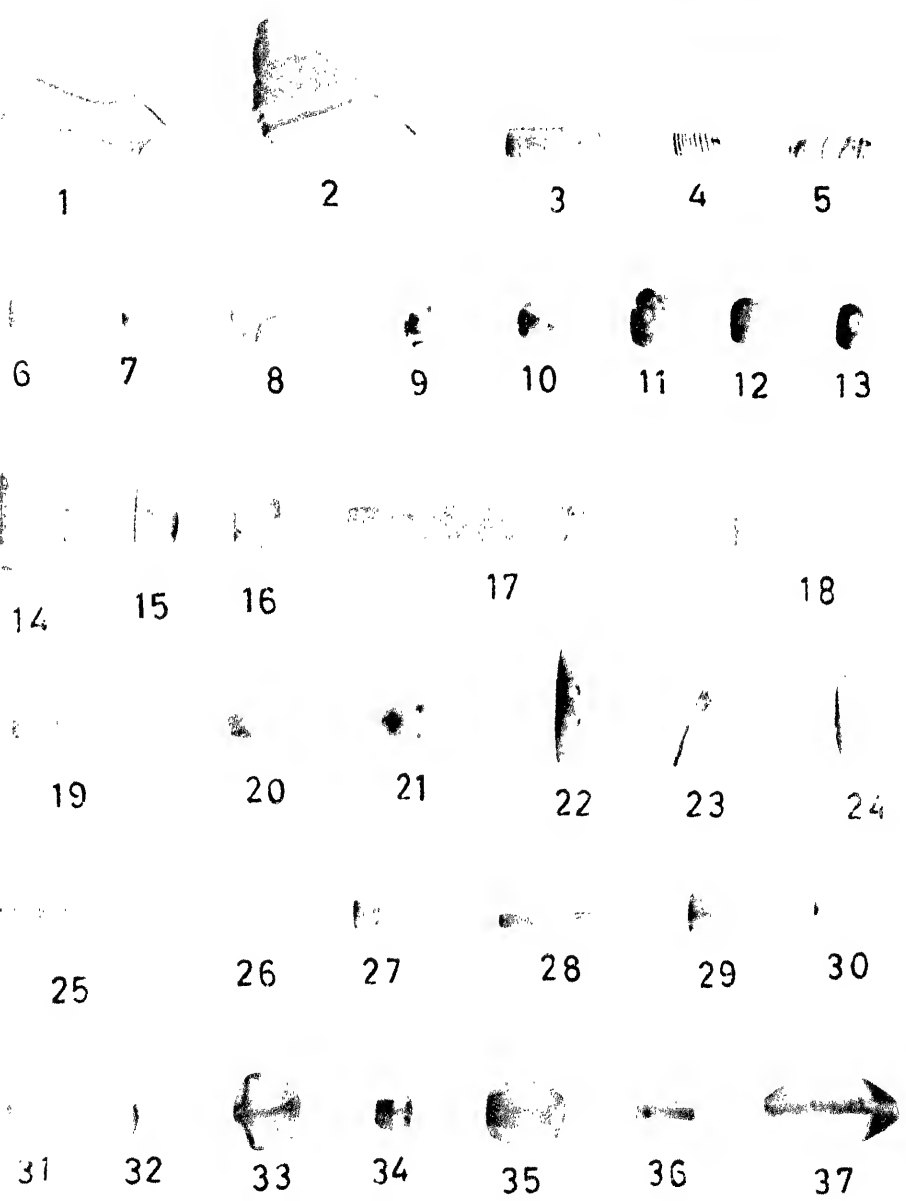
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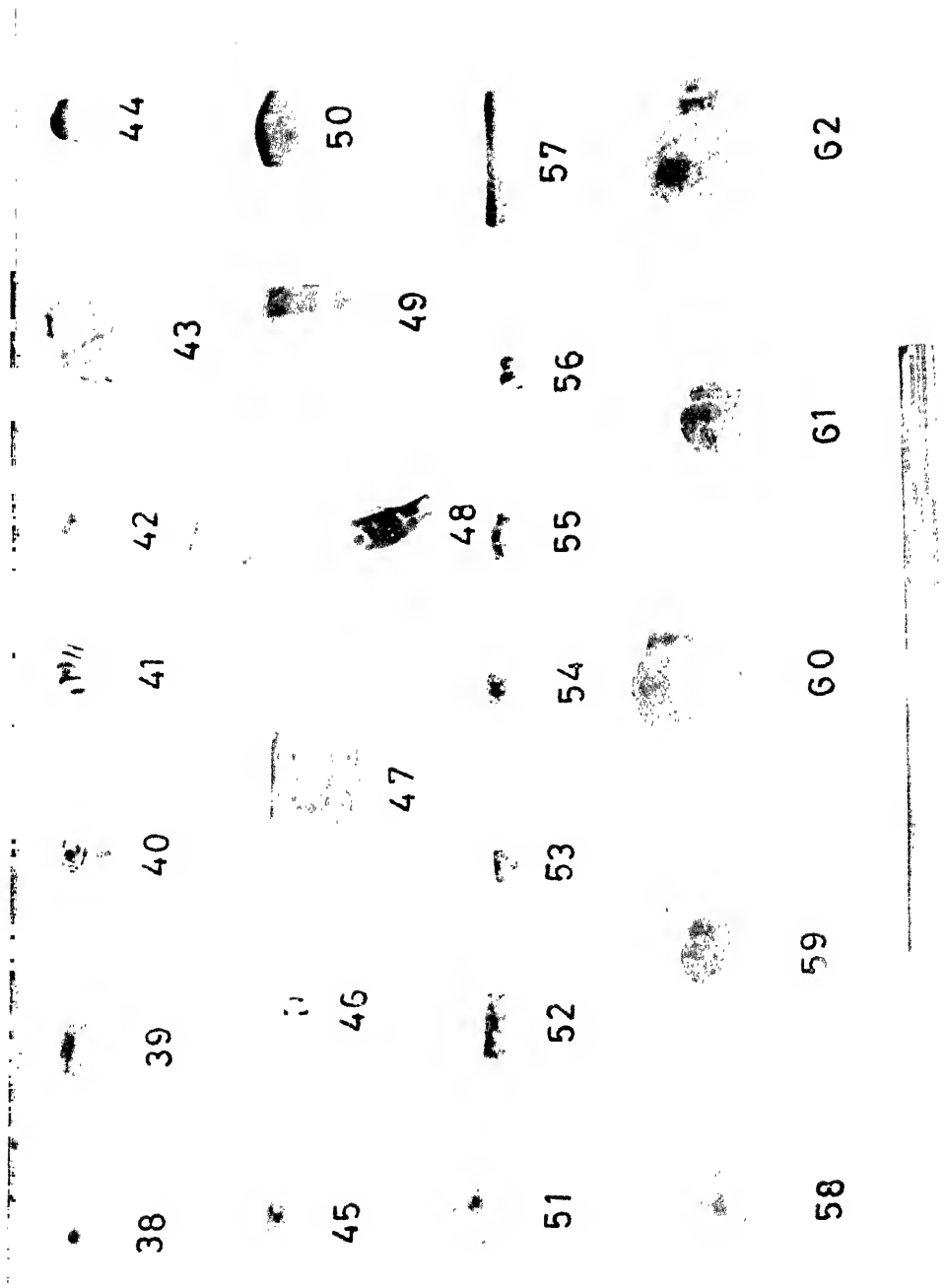
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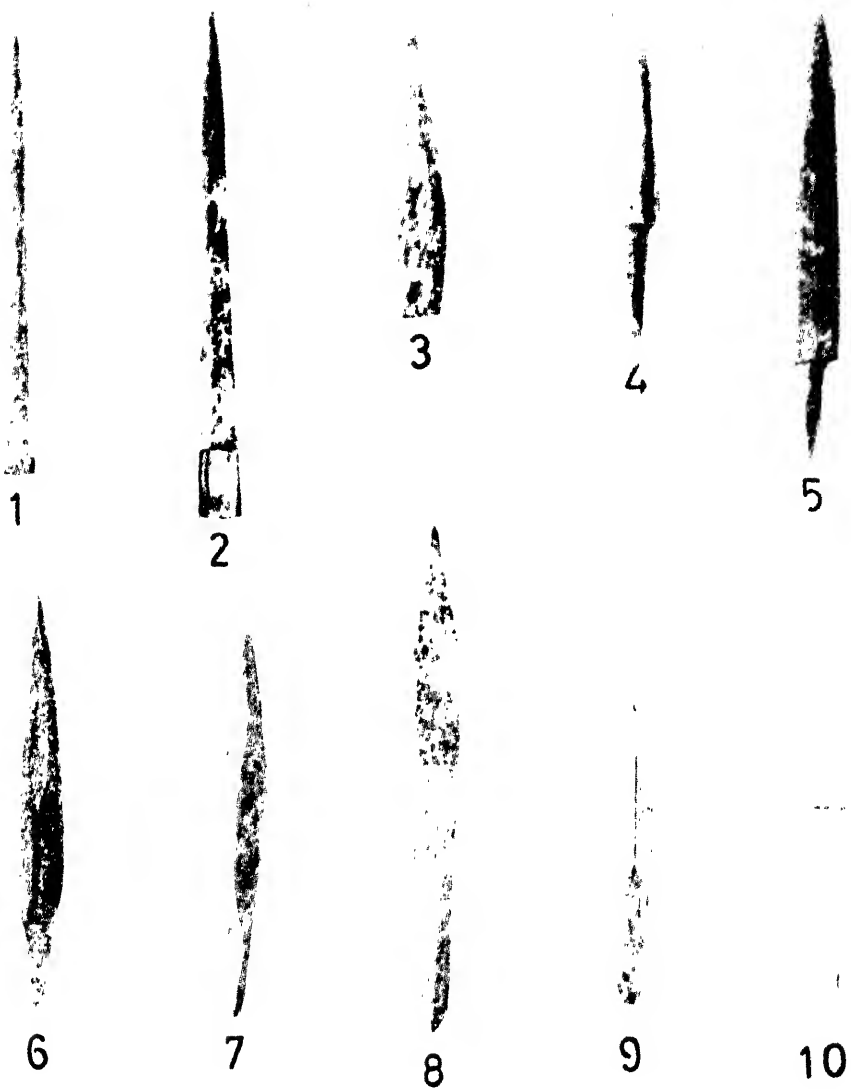


Pl. XX : Terracotta Miscellaneous Objects.

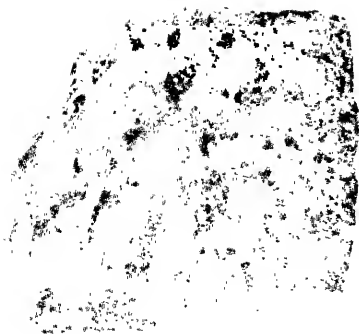


Pl. XXI : Beads.





Pl. XXIII : Bone and Ivory arrowheads and pins.



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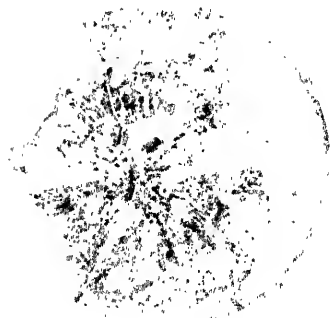
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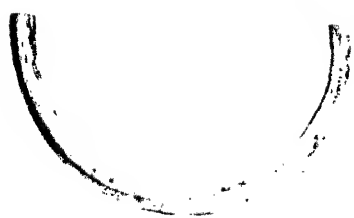


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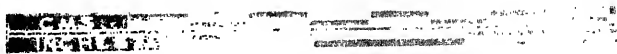
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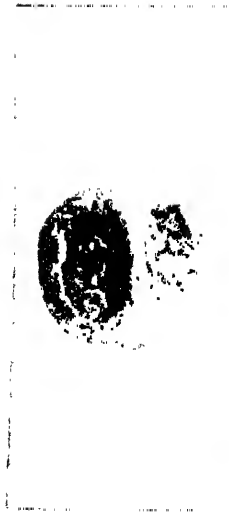


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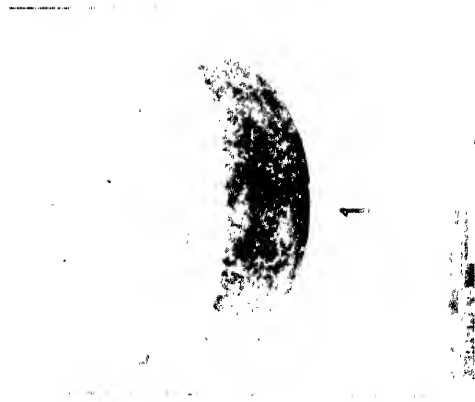


Pl. XXV : Bangles and Rings.

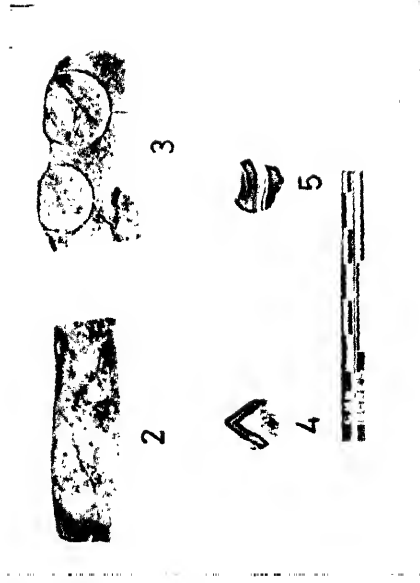




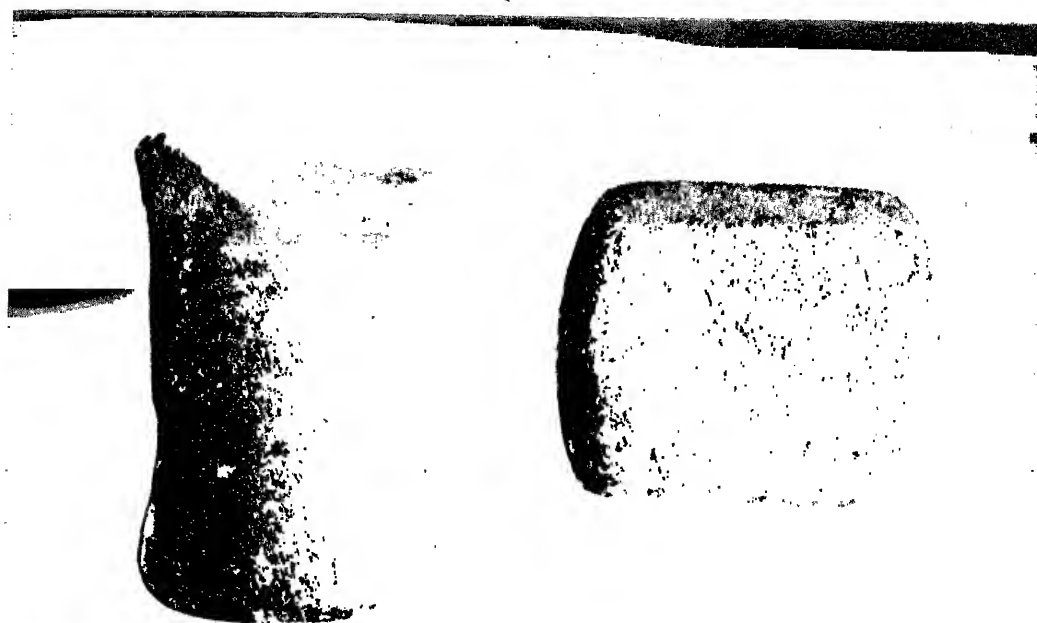
Pl. XXVI A : Inscribed sealing.



Pl. XXVI B : Stone object no. 1.



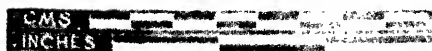
Pl. XXVI C : Stone objects nos. 2-5.



6

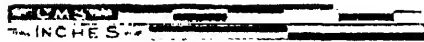
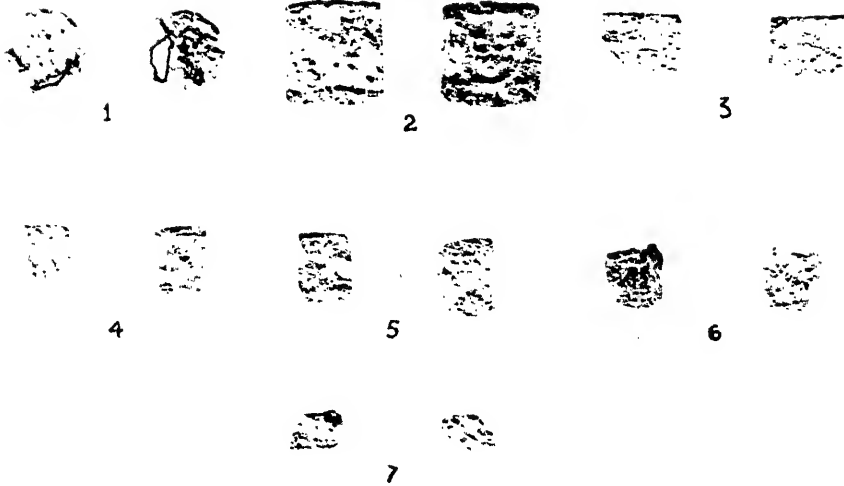


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Pl. XXVII : Stone objects, nos. 6-8.

~~MSJ-31.  
 28 July 82  
 [Signature]  
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Pl. XXVIII : Coins







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Title-Excavations at  
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